Downeast Region Management Plan

First Draft

Maine Department of Conservation
Bureau of Parks and Lands

Revised 12/1/04

Table of Contents

I. Executive Summary

This document constitutes a ten-year Management Plan for the Reserved Land properties within the Downeast Region of Maine as managed by the Bureau of Parks and Lands (the Bureau). These properties include the Donnell Pond, Rocky Lake, and Cutler Coast Units, along with the Great Heath; and public lots in Osborn Plantation, T24 MD, Number 14 Township, Number 21 Township, and Marion Township.

This plan meets the requirements for development of multiple-use management plans as set forth in Title 12 MRSA § 1847 (2), and is prepared in accordance with the guidelines set forth in the *Integrated Resource Policy* revised and adopted in December 2000 by the Bureau. These laws and policies direct the Bureau to identify and protect important natural, ecological, and historic attributes; enhance important fisheries and wildlife habitat; provide opportunities for and variety of quality outdoor recreation experiences; and provide a sustained yield of forest products by utilizing forest management techniques and silvicultural practices that enhance the forest environment.

This Plan is a commitment to the public that these lands will be managed in accordance with the Bureau's mission and goals, and within prescribed mandates. Revisions to these Plan commitments will occur only after providing opportunities for public comment. This Plan also serves as guidance to the Bureau staff. It provides clear management objectives within the Plan area, while providing a degree of flexibility in achieving these objectives. This document is not, however, a plan of operations.

Summaries of the resources, issues, and management objectives for each Unit or parcel are provided separately. One of the important aspects of the plan development process, however, involves consideration of the Bureau's ownership within the larger region. By looking at the resources within each parcel, in view of the larger system of resources in which it exists, resource planners were better prepared to provide a more balanced spectrum of opportunities across the regional Plan area.

This Plan is applicable for the next 10-year period. After that time, a review and update of the information and management objectives will be conducted. The Bureau recognizes that some resources and management issues will undergo change over time, and several of the stated objectives will require longer than the 10-year Plan period to achieve.

This Plan is the result of an intense interdisciplinary review. Extensive efforts were made to incorporate public comment, to ensure an integrated approach to the development of this Plan. The Bureau acknowledges the helpful participation of members of the public, including the Downeast Region Advisory Committee (listed in Appendix D), local focus groups, and a variety of professional resource managers - both public and private - in the development of this plan. Continued public support will be needed to achieve the management objectives outlined in this Plan. Our hope and expectation is that this Plan lays a solid foundation for public and private cooperation in achieving the objectives set forth in this document.

II. Components of the Resource Management System

Summary of the Planning Process

The Bureau of Parks and Lands is statutorily required to develop management plans for all Reserved and Non-reserved Land properties across the state. The criteria, planning methodologies, and resource management policies described in the Bureau's *Integrated Resource Policy* as revised in December, 2000 provided the necessary guidance towards the development of this and other plans.

Due to the Bureau's relatively large and expanding landbase, properties chosen to undergo the management planning process are being selected on a "regional" basis, or those properties which occur somewhat together within certain geographic areas of the state. The parcels within the Downeast Plan were selected on the basis of their relationship or proximity to the "Down East" portion of Maine; or more specifically, the area that includes coastal and coastal interior portions of Hancock and Washington Counties.

Bureau staff then undertook an intense review (preplan phase) of the available resources within the Plan area, including those having natural and geological, historic and cultural, fisheries and wildlife, recreation, and timber and renewable resource significance. Much of this information was obtained by conducting formal inventories of specific resource areas (Natural Resource Inventory, Cultural Resource Inventory, etc.). Resource professionals from within the agency provided updated information on wildlife, recreation, and timber resources. Mapping and GIS-related information was also obtained and updated as part of this phase. Another component of the preplan phase involved conducting a variety of forums to determine management issues needing address within the Plan. These forums included an internal scoping session with staff having management responsibility for the downeast area lands; a Public Scoping Session held in Machias to hear from various members of the public regarding the management concerns they had for these properties; and local "focus groups" to hear from members of the public on more specific or locally based issues. Focus Group meetings were held to discuss concerns for the future management of the Blackwoods Byway area of the Donnell Pond Unit, and its relationship to the Department of Transportation's Scenic Byways Plan; a second group was held to hear concerns regarding the off-road vehicle use opportunities on Bureau lands throughout the Plan area. Valuable information relative to the management issues identified in this Plan were obtained at these meetings.

A "Preliminary Planning" (Preplan) document describing the available resources and known management issues was then prepared for review by staff, various members of the public, and the Downeast Public Advisory Committee. The Committee's initial role was to review and discuss the Preplan document on a more formal basis, and to provide input on the overall process for developing the regional plan. Members of this Committee were selected on the basis of their resource expertise, and for their regional and local knowledge in areas important to the management of these properties. Once the Committee had an opportunity to provide this input, the Bureau then determined if

more work was needed to identify resources or issues before moving on to the next phase.

A first draft of the Management Plan was then developed describing the resources, issues, and “resource allocations,” or management commitments, for the Downeast properties for the next 10-year period. Staff resource managers were responsible for developing and proposing these allocations, which defines the type and intensity of management to be applied for all of the lands within the Plan area (a more descriptive explanation of the allocation system may be found in the Bureau’s *Integrated Resource Policy*). A second Advisory Committee meeting was then held to consider comments and concerns resulting from the review of this draft.

Comments from this meeting, along with those from other members of the public and various resource professionals, were used in developing the next draft of the Plan. This draft was circulated in preparation for a Public Meeting, which was held to hear comments and concerns from the general public. These comments were then considered in preparing a draft for review by the Department of Conservation’s Commissioner as recommended by the Bureau Director. After the Commissioner’s review and comment, the Plan was formally adopted.

Summary of the Resource Allocation System

The Resource Allocation System is a land management-planning tool first developed in the 1980's, and further refined when revisions were made to the current *Integrated Resource Policy* document. The system is actually a hierarchy of natural, historic, and cultural resource attributes found on the land base that define the type of management that will be applied where these resource attributes are found. Resources are ranked from those that are scarce and/or most sensitive to management activities to those that are less so. A natural, undisturbed landscape, for example, may be more conducive to dispersed recreation activities than the more intensively developed facilities and activities found in a state park setting. Areas considered to be productive timberlands, where conflicts from other uses are minimal, may be allocated as timber dominant. The resource category requiring the most care of natural, historic, and cultural attributes will dominate over all other categories. The following is an explanation of the Resource Allocation System categories and the ranking of resource attributes.

SPECIAL PROTECTION AREAS
includes natural areas, historic/cultural areas, and ecological reserves

BACKCOUNTRY RECREATION AREAS
includes non-mechanized and motorized recreation areas

WILDLIFE DOMINANT AREAS
includes essential habitat, significant habitat, and specialized habitat areas and features

REMOTE RECREATION AREAS
includes trail corridors, shorelines, and remote ponds

VISUAL CONSIDERATION AREAS
includes Visual Class I and Visual Class II Areas

DEVELOPED RECREATION AREAS
includes Developed Class I and Developed Class II Areas

TIMBER MANAGEMENT AREAS

Monitoring

1) Plan Recommendations. The Bureau will develop a schedule for implementing, accomplishing, and tracking the management recommendations put forth in the Plan. These recommendations will be utilized to determine work priorities and budgets on an annual basis.

2) Easements. The Bureau is in the process of developing monitoring protocols for the easements it holds on the Units. These protocols will address the regular inspection of these lands to ensure that easement conditions are being met. Once these protocols are established, they will automatically be incorporated in the Plan.

3) Public Use. In 2002, the Bureau conducted public use monitoring on the Donnell Pond Unit along with other Units statewide in an effort to understand better the use patterns and frequency of use occurring on these lands. A larger effort will be conducted in an effort to acquire this information.

4) Post-harvest Monitoring. The Bureau is currently developing a post-harvest monitoring plan to assist forest managers in assessing harvest outcomes. The monitoring plan will also address water quality, and Best Management Practices (BMP's) utilized during harvest activities.

5) \Wildlife. The Bureau, through its Wildlife Biologist and Technician, routinely conduct a variety of species monitoring activities statewide. On these Units, waterfowl brood counts have been conducted and will be continued or expanded where appropriate.

6) Ecological Reserves. A contract with the Maine Natural Areas Program has been established to conduct baseline data collection on all designated Reserves. This activity has since been completed on the two Reserve areas in the Unit. These areas will be revisited for monitoring purposes at yet-to-be-determined intervals.

III. Regional Context

A. Introduction

The Downeast Region includes Public Reserved Land properties in proximity to coastal Hancock County and all of Washington County. The Region parallels the Down East & Acadia Region, one of eight areas designated by the Maine Office of Tourism for marketing purposes. This region is reported in the 2003-2008 Statewide Comprehensive Outdoor Recreation Plan (SCORP) as being the third most visited region in the State. Statistics telling the tourism story for the region indicate that the vast majority of those visits occur in the Bar Harbor/Ellsworth portion of the region. The remaining portion of the region, especially Washington County, is working to find a niche in the tourism industry. There are several on-going and complimentary efforts to "brand" the experiences that the traveling public can expect in different parts of the region through the designation of travel corridors or loops within the region. These efforts include creation of sub-regional committees of local business owners, resource management professionals, conservationists, and residents to properly identify the loops or corridors that can serve the economic and social priorities of their communities. They also include support from the Maine Department of Transportation to map these loops and corridors, link them to similar efforts in adjacent regions and identify infrastructure needs that will ensure that visitors can find their way, enjoy their experience, and support local economies without harming fragile resources. The third effort that is a Governor-sponsored initiative that provides the expertise of a nationally recognized nature-based tourism consultant to the Downeast region (and two other regions in Maine). Finally the Vacationland Resources Committee of the Down East Resource Conservation and Development district has completed an update to the Down East Sustainable Tourism Initiative (DESTINY) for 2010 which indicates that nature based tourism is a niche that could benefit Washington County.

The region is host to three Scenic Byway corridors, the Acadia All American Roads on Mount Desert Island, the Schoodic National Scenic Byway along the western shore of Frenchmans Bay and the State Scenic Byway on Route 182, the "Blackwoods" road connecting the villages of Franklin and Cherryfield along 12.5 miles of forests, ponds, lakes, rocky hills and blueberry barrens. The Blackwoods Byway provides access to the Donnell Pond Unit and management recommendations for the Byway and the Donnell unit will be closely linked. Scenic Byway designation is accomplished in areas that showcase outstanding cultural, historical and archeological, recreational, natural and scenic resources. These attributes are well established along the designated byways in the Downeast region but they are present along several other transportation corridors as well.

In general the area is known to the traveling public not so much for particular destinations, excluding Acadia National Park, but for the overall experience that a visitor can expect. Many who seek out the Downeast region look to avoid the overcrowding they find in the premier destination of Acadia and the development that surrounds it. This less commercialized experience is supported by the Bureau lands in the Downeast region as one that includes adventure and outdoor recreation, wilderness experiences, and scenic, undeveloped coastlines. Linked to these experiences are historic villages

rich in cultural expressions of past eras and continuing reliance on the sea and land for such delights as lobster dinner and blueberry pie.

The larger and more utilized parcels within the Plan area are adjacent to the Route 1 corridor, which provides the primary centers of commerce in Hancock and Washington Counties. The Downeast region is also considered the “the blueberry capitol of the world,” producing more than 90% of the world’s supply of wild blueberries. Many of the properties considered in this plan are near or within areas where the commercial management of blueberries takes place.

B. Natural and Geological Resource Summary

The Downeast region is characterized by relatively young spruce-fir and mixed forests with a history of fire, budworm damage, and timber harvesting. The region also supports many of the largest bogs and fens in Maine, such as the Great Heath. In particular, coastal bogs like those in the Cutler Unit are restricted to eastern Maine and are among the most ecologically notable wetlands in the state.

Physical Landscape: Geology, Soils, Hydrology, and Wetlands. West of the Great Wass archipelago (i.e., Jonesport and Beals), coarse-grained granite dominates the landscape, including the hills around Tunk Lake and Donnell Pond. East of Great Wass Island, including the Cutler and Rocky Lake Units, bedrock is dominated by more erodable, fine-grained volcanic and metamorphic rocks, and weathering of these bedrock types has resulted in a lower, relatively flat terrain. Gabbro, diorite, and volcanic rocks dominate the landscape here.

Except for a broad, elevated peninsula around Tunk Mountain, most of the Downeast region was submerged during the most recent glaciation, when the ocean reached inland up the major river valleys. Consequently, much of the area is underlain by ice-contact glaciofluvial and glaciomarine sediments. Over the last 13,000 years, the coast has taken on its current form due to uplift following glacial retreat.

The Pineo Ridge barrens around the Great Heath in Columbia, Cherryfield, Deblois, and T18 MD represent one of the state's largest examples of a glaciomarine delta. This delta is composed of coarse-grained sand and gravel, with poorly drained peats occurring in kettleholes and pockets along the margins of the delta. West of the Pineo Ridge delta, glacial till is the dominant surficial deposit. Further to the east, finer-grained glaciomarine deposits cover much of the lowlands. Ridge tops, rocky headlands, and exposed islands support excessively drained, thin soils where glacial action and subsequent weathering has removed much of the surface material.

Several major rivers dissect the Downeast landscape, including the Union, Narraguagus, Pleasant (which bisects the Great Heath), Machias, East Machias (which bisects Rocky Lake), and Dennys. The latter five rivers have been targeted for enhancement and restoration through the state's Atlantic Salmon Conservation Plan. According to National Wetlands Inventory (NWI) maps, wetlands account for or nearly one quarter of the Downeast landscape, with nearly half of the inland wetlands forested.

Uncommon Natural Communities. Coastal Plateau Bogs are restricted to the Downeast region of Maine, where they reach their southern limit. In these peatlands, like Great Heath and Cutler, a cool and wet year-round climate create favorable conditions for a high diversity of peat moss (*Sphagnum)* species. The cool climate also enables colonization by boreal plants such as black crowberry (*Empetrum nigrum*) and baked appleberry (*Rubus chamaemorus*), otherwise restricted to alpine and sub-alpine areas in Maine.

Numerous "Coastal Headland Ecosystems" occur in the region, including the outcrops of the Cutler Unit. Characteristic plants of these coastal headlands include mountain cranberry (*Vaccinium vitis-idea*) and black crowberry. Some rare or uncommon plants near their southern range limits in this region include marsh-felwort (*Lomatogonium rotatum*), blinks (*Montia fontana*), Hookers's iris (*Iris setosa v. canadensis*), bird's eye primrose (*Primula laurentiana*), roseroot (*Sedum rosea*), and baked appleberry.

Large tidal marshes are uncommon in the region and virtually absent from Bureau lands, in part because the granitic coastline has not allowed coastal drainages to erode into low, broad embayments. Tidal rivers such as the Narraguagus, Machias, Pleasant, Dennys, and St. Croix support a network of tidal wetlands and extensive tidal flats. Salt marshes are most developed in the Narraguagus Bay/Pleasant Bay estuary. Many of these marshes are important nesting, feeding, and staging areas for shorebirds and waterfowl, and they are important nurseries for anadramous fish including the rare shortnosed and Atlantic sturgeon.

Ecological Reserves. The combination of both uncommon and common but exemplary natural community types has led to the designation of 18,363 acres of Ecological Reserves in Plan area, comprising approximately 41% of the landbase in the Downeast Region. A list of these areas are found in the table below:

Unit	Ecological Reserve Location	Reserve Acres
Donnell Pond	Black Mt.	1,940
Donnell Pond	Spring River Lake/Tunk Mt.	4,010
Great Heath	Great Heath	5,681
Cutler Coast	North Lot	3,489
Cutler Coast	South Lot	1,727
Rocky Lake	East Machias River	1,516
Total		**18,363**

State lands currently provide the only supply of formally designated Ecological Reserve lands in the region; however, the Nature Conservancy owns 1,500 acres on Great Wass Island in the Town of Beals that is being managed in a way consistent with Reserved land principles. Consideration has also been given to other privately owned conservation lands, although most of these have been determined to be too small to qualify for Reserve land status. There are also federal lands at Moosehorn and Petit Manan Wildlife Refuges, and Acadia National Park that may also be comparable.

C. Historic and Cultural Resource Summary

The Downeast region of Maine, comprised primarily of Hancock and Washington Counties, has been home to Native American people for thousands of years. Petroglyphs and archaeological discoveries show that the Machias Bay area, in particular, was the site of significant Native activity and some of the most fruitful archaeological discoveries in Maine have shown a Native presence in the Meddybemps area outside Calais.

Early European exploration of North America brought numerous forays to the coast here, most notably by Samuel de Champlain in 1608, with the possibility that Viking exploration discovered the region as early as 1200 A.D.

During the American Revolution this region was a contested area between settlers loyal to the British and American causes, a conflict borne out by British raids and American successes around Machias. In the last two centuries it has been a region known primarily for its fisheries and agriculture as well as recreational opportunities.

In addition, Maine wild blueberries from the area have become a sought after commodity, giving local people an additional economic opportunity. Jasper Wyman, a well-known blueberry processor, for example, owned the blueberry plains near Schoodic Nubble. These fields were productive enough in the 1950s that Wyman set up a cable operation to transfer the picked crop down to the railroad tracks. At its peak, the present field below the mountain produced upwards of 50,000 pounds annually.

D. Fisheries and Wildlife Resource Summary

Fisheries. The overarching fisheries issue Downeast is Atlantic salmon restoration in the seven downeast rivers. The U.S. Fish and Wildlife Service is about to release a salmon recovery plan that primarily focuses on riparian protection strategies. The Pleasant, Narraguagus, East Machias and Dennys Rivers or portions of their watersheds occur on all four of the downeast units and some of the smaller lots. The bureau will need to communicate and coordinate salmon restoration activities with the Atlantic Salmon Commission and other entities. The greatest concern to bureau management will be protection of water quality during management activities. There may be an opportunity for the bureau to conduct instream habitat improvements on its portion of the salmon rivers noted above.

Wildlife. A combination of low basic fertility, fire and past land use have resulted in fair to poor habitat quality for most common wildlife species in the downeast region. Most common species occur here but in lower numbers than in other parts of Maine. Some notable exceptions are island nesting birds and the bald eagle. Downeast is the stronghold for bald eagles. Island nesting seabirds such as terns and eiders are doing well and habitat acquisition efforts spearheaded by the Petit Manan Nation Wildlife Refuge ensure a secure future for these sensitive habitat specialists.

American woodcock are also doing well Downeast because of abundant preferred habitat, reverting farm fields, extensive wetlands, meadows and blueberry barrens. Extensive habitat research on the woodcock has been conducted at the Moosehorn National Wildlife Refuge with headquarters in Baring and satellite units in Edmunds. The

Moosehorn NWR is the only refuge dedicated to woodcock research and Cobscook Bay State Park is operated on Moosehorn land under a lease from the refuge.

The Cutler Coast Unit is home to a grassland complex (bluejoint meadows) that is unique to the Downeast region of the state, providing habitat for several rare bird species.

Summary of Wildlife Resources withn the Downeast Region Plan Area

*Habitat Type**	*Donnell Pond*	*Rocky Lake*	*Cutler Coast*	*Great Heath*
Essential	Bald Eagle Nest	Bald Eagle Nest (2)	none	
Significant	Wetlands	Wetlands	Wetlands (uncommon bird species)	Wetlands
	Waterfowl and wading bird hab.	Deer Wintering Area		Waterfowl and wading bird hab.
Specialized	Riparian Areas	Riparian Areas	Riparian Areas	Riparian Areas
		Atl. Salmon River		Atl. Salmon River

* see Glossary

Regional Wildlife Goals. The regional wildlife habitat goal for managing these properties is to increase the amount of softwood type. Past management, primarily due to spruce budworm and economic forces, has dramatically reduced the spruce/fir stocking in the region. Most areas are well regenerated but are still 30 years out from having significant stocking of harvestable size spruce and fir. The challenge will be to retain much of the mature softwood habitat type while encouraging the growth of younger softwood.

A second and equally important goal will be to play a role in restoration of the threatened Atlantic Salmon. The bureau manages significant shoreline on 4 of the Downeast salmon rivers and has the opportunity to lead by example in managing riparian areas on these streams. The bureaus' riparian management strategies will provide protection of water quality that is critical to restoring salmon.
A third regional goal is to continue to provide significant amounts of mature forest on the ownership for species that require it. Concurrent with this goal is providing significant amounts of multi aged forest stands rich in vertical structure.

E. Recreation Resource Summary

The region is the eastern terminus of the Maine Island Trail, a 350-mile waterway that extends along the coast from Portland to Machias. This nationally recognized water trail offers camping and day use opportunities for small boaters on coastal islands and mainland sites. Forty-two Bureau owned islands and several state parks are part of this water trail which is stewarded by the Maine Island Trail Association.

Wholly within the Downeast Region are the properties managed for recreation by the Cobscook Trails Coalition. Under the leadership of the Quoddy Regional Land Trust, a

number of public and nonprofit landowners have joined together to manage their properties to provide nature tourism opportunities and the benefits of shared management costs.

A number of popular canoe touring routes traverse the rivers and lakes of the region. These include the St. Croix (State Park lands), the East Machias and the Machias Rivers.

Opportunities for sea kayaking, sailing and other watersports also abound along the many miles of undeveloped coastline. The Maine Water Sports Network began in Washington County to reestablish a lifestyle of reliance on Washington County's water resources with the goals being a stronger economy, and healthier communities and people. The Maine Water Sports Network seeks to make the region a world leader in providing opportunities for diverse, human-powered water sports.

The Downeast Region is home to five staffed state parks: Cobscook Bay and Lamoine offer overnight camping and day use faciliites; Roque Bluffs, Shackford Head, and Quoddy Head are open for day use only. A number of undeveloped properties, along with several designated historic sites area also within the region (see table below).

Downeast Region State Parks, Historic Sites & Undeveloped Park Lands
Administered or Managed by the Maine Department of Conservation, Bureau of Parks & Lands, by County
30-Apr-04

Cty	REG	Name	BP&L Interest	Mgmt Agcy	Location	Acres	Major Use
HA	N	Battery Gosselin	Fee	BP&L	Castine	0	historic
HA	N	Branch Lake	Fee	BP&L	Ellsworth	1,273	undeveloped
HA	N	Eden	Ease	BP&L	Bar Harbor	13	open space
HA	N	Fort George	Fee	TOWN	Castine	3	historic
HA	N	Holbrook Island Sanctuary	Fee	BP&L	Brooksville	1,343	trails, nature interp.
HA	N	Lamoine	Fee	BP&L	Lamoine	55	camp, picnic
HA	N	Lamoine Beach	Fee	TOWN	Lamoine	13	swim
HA	N	Tennis Preserve	Fee	BP&L	Deer Isle	148	trails
HA	N	Thrumcap Island	Ease	BP&L	Islesboro	1	open space
HA	N	Tidal Falls	Ease	BP&L	Hancock	4	scenic
WS	N	Eastern Head	Fee	BP&L	Trescott Twp	263	undeveloped
WS	N	Fort O'Brien	Fee	BP&L	Machiasport	6	historic
WS	N	Foster Island	Ease	BP&L	Harrington	400	open space
WS	N	Gaddis Pool	Fee	BP&L	East Machias	2	river access
WS	N	Gleason Point	Fee	TOWN	Perry	100	boat access
WS	N	Goods Point	Fee	BP&L	Steuben	0	undeveloped
WS	N	Pleasant River Lake	Fee	BP&L	Beddington	491	undeveloped
WS	N	Quoddy Head	Fee	BP&L	Lubec	541	trails, picnic, scenic
WS	N	Roque Bluffs	Fee	BP&L	Roque Bluffs	274	swim, picnic
WS	N	Shackford Head	Fee	BP&L	Eastport	87	trails, scenic
WS	N	Spednic/St Croix	Fee	SCIWC	Vanceboro, Dyer,Lamb L,Fowlr	2,040	canoe,camp
		20 Areas			**Total Acres**	**7,057**	

Key
Fee = Acres owned in fee
Eas = Conservation Easement acres
Reg = State Parks Regional Administrative Office (North or South)

Federally owned lands in the Downeast area provide a wide variety of recreational opportunities (see table below).

Downeast Federal Conservation and Recreation Lands				
Cty	**Owner**	**Federal Lands**	**Location**	**Acres**
H	NPS	Acadia National Park (ANP)	Bar Harbor, Mount Dessert, Southwest Harbor, Tremont, Gouldsboro, Winter Harbor	32,494
		ANP Other		1,110
		ANP Easements		10,452
W	NPS	St Croix Is International HS	Calais	45
H	NPS	Jones Pond	Gouldsboro	250
			Subtotal NPS	**44,351**
W,H	USFWS	Petit Manan National Wildlife Refuge Complex	Jonesport, Addison, Millbridge, Steuben, Gouldsboro, Winter Harbor, Swans Island, Tremont	7,282
W	USFWS	Moosehorn National Wildlife Refuge Complex	Baring, Meddybemps, Charlotte, Robbinston, Calais, Edmunds	28,751
H	USFWS	Craig Brook National Fish Hatchery	Orland	136
H	USFWS	Green Lake National Fish Hatchery	Ellsworth	113
			Subtotal USFWS	**36,282**
			Total Federal Lands	**80,633**

Key: NPS = National Parks Service; USFWS = US Fish and Wildlife Service

The Downeast region is the locus of a recently established 700-mile interconnected ATV system that extends from Eddington to Calais and from Cutler to Grand Lake Stream. The system was established as a cooperative effort of International Paper Company (now GMO Renewable Resources), Wagner Timberlands, area watershed councils, seven ATV clubs, and other landowners in an effort to organize and control use. The system intersects north of the Donnell Pond/Spring River Lake Unit and the Great Heath, and crosses the Rocky Lake Unit and the Cutler Coast uplands.

The region also has about 663 miles of state-supported snowmobile trails, of which 150 miles are part of the Interconnected Trail System (ITS). The sled trails overlap the ATV system in a number of locations. The snowmobile trail on the Rocky Lake Unit is the only groomed trail on Bureau lands considered in this plan. Snow conditions within the region vary greatly from year to year, limiting opportunities compared with other areas of the state. When snow cover is adequate, the season only lasts about 6 weeks.

The abandoned railroad from Bangor to Calais has been explored as a multiple use trail and off-road segment of the East Coast Greenway, supporting both motorized and nonmotorized uses, including ATV, bicycling, and horseback riding. The rail bed intersects the Donnell Pond Unit at its southwest corner, and crosses the southeastern corner of the Rocky Lake unit. The use of rail beds as an off-road means to connecting communities has become an important concept statewide, as well as the Downeast

area. The future role and use of this corridor is beyond the purview of this Plan, but it is recognized that decisions on this project will be important relative to the future uses of both the Donnell and Rocky Lake Units.

F. Timber and Renewable Resource Summary

The Downeast-Acadia area of Maine is mostly forested, with a high percentage of land in relatively infertile soils. The Downeast region is characterized by relatively young spruce-fir and mixed forests with a history of fire, budworm damage, and timber harvesting. A comparison of the statewide forest inventory conducted by the Maine and U.S. Forest Services show that Washington County has the lowest net timber growth of any part of the State.

Timberland Volumes (cords) per Acre – BP&L and USDA Forest Service			
	All regulated Acres	Plan Area	
BP&L	**19.44 cd/ac**	**15.76 cd/ac**	
	Statewide*	Washington County	
USDA FS	**14.54 cd/ac**	**11.38 cd/ac**	

**"Statewide" is limited to the seven northerly "regions" used for the USDA Forest Service inventory, omitting the Capitol and Casco Bay regions. Data is from the 1995 report.*

Hancock County (location of the Donnell Pond Unit) shows somewhat better growth, but the lands closer to the seacoast tend toward the more infertile soils. Spruce budworm killed much of the fir and a considerable number spruce in the 1970s and early 1980s, with heavy salvage harvesting further reducing timber inventories. Except for the smaller lots, the lands subject to this Plan were mostly acquired by the State after the worst budworm damage had passed. Only a small amount of budworm salvage was conducted under the Bureau's management. However, due to both site quality and history, this Plan area holds lower timber volume per acre than any other region of the state.

Most soils on these tracts are either excessively or poorly drained; there is comparatively little "mesic" or moist/fertile land. Exposed boulders abound, complicating access and timber harvesting. As is often common with well-drained sites, fire history is extensive and early successional stands are common. These parcels have a greater proportion of this type of site and forest than anywhere else on Bureau lands. By comparison, the Duck Lake Unit, 20-30 miles farther inland, has considerable coarse soil, boulders, and fire history, but also contains a lot of mesic acres.

A. Donnell Pond/Spring River Lake

1. Character of the Landbase

The Donnell Pond Unit encompasses 15,380 acres located in the towns of T7 SD, T9 SD, T10 SD, Franklin, and Sullivan, and is best regarded for its array of mountain tops and numerous ponds in close proximity to the nearby coast of Maine.

Acreage Breakdown by Town/Township

Town/Township	Acres
Franklin	1,219
Sullivan	963
T7 SD	210
T9 SD	1,459
T10 SD	11,529
total	**15,380**

The original acquisition of the Donnell Pond Unit was accomplished in 1988 through a complex, five-way land trade and purchase transaction. Previous owners of the Unit were Prentiss and Carlisle, Diamond Occidental Corporation, and the Bryan family. Many individuals and organizations were involved in the assemblage of this valuable public land resource. In 1994, the Bureau acquired 6,915 acres from the Pierce family, including much of the frontage and adjacent lands to Spring River Lake, the southern slopes of Tunk Mountain, and additional frontage on the north and eastern shore of Tunk Lake. Separate transactions in 1998 and 2001 with the Noyes family and the Fiery Mountain Trust resulted in the acquisition of the Card Mill boat launching site, and the Fiery Mountain/Little Pond area. An additional transaction with International Paper in 2003 resulted in the acquisition of the so-called “Tilden Block,” a 274-acre inholding north of Spring River Lake and east of Tilden Pond.

In addition to the fee lands mentioned above, there are two Bureau-administered conservation easements totaling 468 acres; 344 acres in T9 SD, part of the original 1988 acquisition, and an additional 124 acres in Franklin adjacent to the easement parcel in T9 SD. The conservation easement includes 3.4 miles of frontage on Donnell Pond, and protects scenic values from within the Unit. There are no provisions for public access and recreation on these easements.

The Unit is adjacent to two parcels of private land owned by the Bryan family, containing 1,400 acres of conservation easements held by the Maine Department of Inland Fisheries and Wildlife. These parcels protect frontage on the east side of Tunk Lake and encompass the summit of Catherine Mountain. The Department holds six other easements (200 acres) on private lands not abutting the Unit, which likewise protect viewshed and lakeshore quality.

The Donnell Pond Unit is one of the more scenic areas found in the Public Reserved Lands system. The terrain is generally mountainous to rolling, with much of the lowlands being wetlands or open water. Approximately 91% of the Unit is forested, with most of the remainder being open wetland and high elevation ledge outcroppings. Wizard Pond is a higher elevation water body (830 feet) in the Black Mountain area. High elevation wetlands are also found. The highest elevations are the Black Mountain peaks (1,049 and 1,094 feet). The summit of Tunk Mountain (1,140) is currently in private ownership. Scenic vistas are afforded from the high elevation vantage points on these mountains.

Mountain Tops and Elevations

Mountain Top	Elevation
Schoodic	1060
Black (west peak)	1, 049
Black (east peak)	1.094
Caribou	960
Tunk*	1,140
Catherine	962
Round	592
Fiery	553

* The summits of Tunk and Catherine Mts. are on private land

Donnell Pond offers exceptional recreational and scenic resource values. The Land Use Regulation Commission's (LURC) "Wildlands Lake Assessment" (Chapter 10 Appendix C, Land Use Districts and Standards) rates the Pond's fisheries, scenic quality, and shoreline character as outstanding. Donnell Pond, Spring River Lake, and Tunk Lake - with its notable clear waters - were given the highest resource rating of 1A. The many sand beaches, coves, and forested shorelands are framed by moderate to extreme mountain slopes and ridgelines.

Shillalah Pond, Rainbow Pond, Wizard Pond are picturesque backcountry ponds in the Black Mountain/Caribou Mountain area. Shillalah flows into Donnell Pond and Rainbow flows into Tunk Lake. As part of Spring River/Tunk Lake acquisition, the Bureau acquired all of the property around Long Pond, and the northern half of Round Pond, both south of the Route 182 corridor.

The Spring River Lake parcel north of Route 182 includes numerous small ponds in close proximity to Tunk Mountain. Salmon Pond, Mud Pond, the southern third of Anderson Pond, Little Long Pond, and Tilden Pond are within the Unit. Except for the seasonal camp on Anderson Pond, there is no development on the other ponds within this portion of the Unit. Towards the north and east of Spring River Lake is Downing Bog, an extensive wetland area having significant ecological and wildlife habitat value.

Little Pond in Franklin is a remote pond offering outstanding views of Schoodic Mountain and Schoodic Nubble. The pond is primarily accessed from the Calais Branch rail line to the south and commercial blueberry land to the west.

Lakes and Ponds in the Donnell Pond Unit

Lake/Pond	Town/Township	Total Acres	Shoreline within the Unit (miles)	% shoreline within the Unit
Donnell Pond (fee)	Franklin/T7 SD	1,120	8	66
Donnell Pond (easement)	T7 SD		3.4	20
Shillalah Pond	T10 SD	17	1.5	100
Tunk Lake	T10 SD	2,010	7	50
Rainbow Pond	T10 SD	17	1	100
Wizard Pond	T10 SD	3	.25	100
Spring River Lake	T10 SD	704	7	66
Tilden Pond	T10 SD	36	1.5	100
Little Long Pond	T10 SD	55	2.5	100
Mud Pond	T10 SD	8	.50	100
Salmon Pond	T10 SD	10	.75	100
Anderson Pond	T10 SD	39	.5	33
Long Pond	T10 SD	205	5	100
Round Pond	T10 SD	205	1.5	25
Little Pond	Franklin	40	1.5	100
total		**3,349**	**41.9**	**66%**

The Route 182 corridor, also known as the Blackwoods Scenic Byway, passes through the Unit between Franklin and Cherryfield. The Byway provides a scenic and shorter alternative to Route 1, and provides recreational access to much of the Unit. The Hancock County Planning Commission and the Washington County Council of Governments have developed a management plan for this important scenic corridor for the Maine Department of Transportation. This Plan address issues and opportunities relating to both the long and short term vision described in the Byway Plan.

Route 183 forms part of the Unit's southern boundary and provides recreational access to the southern portion of Donnell Pond, along with Schoodic, Black, and Caribou Mountains. The Calais branch of the abandoned Maine Central Railroad, owned by the Maine Department of Transportation, crosses the southern end of the Unit in Sullivan.

2. Resources and Management Issues

a. Natural and Geological Resources

The mountains and lakes of this region form a distinctive landmark in the east coastal region of the state. The Unit lies at the center of a 70 square-mile area known as the Tunk Pluton, a granite intrusion rich in quartz and feldspar that weather to coarse acidic soils. The soils are generally thin, and tend to be moderately to excessively well drained. The combination of topography, bedrock geology, and shallow soils has produced a fire-prone environment; producing a diverse mosaic of natural communities. In areas with moderate soil accumulation, the post-fire forest type is typically aspen-birch. Where thin soils occur on the open balds that have burned, black and red spruce are dominant. The vegetation is transitional between that of the spruce-fir-northern hardwoods of northern Maine, and the more temperate forest characteristic of southern Maine. A number of species are near their range limits, including common juniper, golden heather, and highbush blueberry. In addition, red oak, which is abundant on the Unit, rarely forms large stands to the north or east. A 21-acre old growth spruce stand to the southeast of Wizard Pond, located in the saddle of Black Mountain, has been given special protection status for a number of years.

Adjacent to Little Pond is a 120-acre blueberry barren acquired as part of the Little Pond/Fiery Mountain acquisition, which had been actively managed until 1999. The soils on the high ground portion of the barren are thin and fragile, and not currently suitable for management. The lower portions of the barren have been productive in the past, but are in need of maintenance.

The unique combination of features and factors described above led to the designation of two noncontiguous areas as Ecological Reserves, totaling 5,950 acres, and containing 17 exemplary natural communities as identified by the Maine Natural Areas Program. Ecological Reserves are areas of ecological significance where the primary management activity is scientific research. One area (1,940 acres) lies east of Donnell Pond, and encompasses much of the terrain of Black and Caribou Mountains. The second area (4,010 acres) lies north of Spring River Lake, and includes the southern slope of Tunk Mountain, the adjacent small ponds, and the extensive wetlands of Downing Bog to the east. As part of the management regime for these areas, the collection of “baseline data” on these Reserves has been conducted, which will be important to their future study.

In addition to the Reserves, an exemplary Low Summit Bald community and rare plant have been discovered on the summit of Schoodic Mountain, where special protection efforts will need to be implemented due to the high volume of recreational use. The Unit boundary currently includes only ½ of the summit, with the other half under private ownership. Another rare plant species, Wiegand’s sedge, has been found on the edge of Wizard Pond and within the wet woods near Downing Bog. The summit of Round Mountain also supports an exemplary Low Summit Bald community with recent evidence of disturbance from recreational use.

The Natural Resource Inventory for the Unit was updated in 2003, which includes a revision of the original inventory in 1991, a subsequent inventory of the Spring River

Lake/Tunk Lake parcel originally done in 1994, and new inventory information for the recent Fiery Mountain/Little Pond acquisition.

Management Issues

- The open bald of Schoodic Mt. includes an exemplary Low Summit Bald natural community and a rare plant (mountain sandwort), which is of concern relative to the recreational activity on the mountain.
- In addition to those areas within Ecological Reserves, important community types were identified on Round Mountain and a wetland on the southeastern portion of Spring River Lake (SRL); Round Mountain is receiving motorized recreational use that may disturb the natural community.
- The open balds on Black Mountain need to be further evaluated and monitored for potential wear and damage from foot traffic due to the popularity of Black Mountain as a hiking destination.
- The blueberry barren near Little Pond in Franklin needs to be evaluated regarding its future management. The barrens have been managed and harvested in the past, although it is uncertain as to who has conducted this activity. There is also considerable ATV traffic on these barrens, which has eroded away the thin soils along the high ground of the barren.
- The area south of the existing Reserve east of Donnell Pond contains similar attributes to the Reserve, and reevaluated for future inclusion.

b. Historic and Cultural Resources

The historic/cultural resources on the Donnell Pond Unit constitute a blend of past land use activities that contribute to the unique character of the Downeast region. These uses include the presence of Native Americans, logging, milling, nineteenth century settlement, recreation, and other activities as described below.

Nomenclature. Little is known about the place names associated with the Donnell Pond Unit. Two of the water features—Tilden Pond and the Card Mill Stream—were named for 1881 landowners. The word Tunk is Abenaki for "the principal stream." References to a Black, such as Blacks Woods, Black Mountain, and Black House, refer to a Colonel John Black. Col. Black built a family fortune in this region following the war of 1812. He was one of the first persons to realize the economic potential of Maine's forests. He managed land for wealthy Philadelphia investor William Bingham, who owned vast amounts of largely uninhabited land in Downeast Maine.

Native American Sites. Despite the fact that the Donnell Pond Unit contains a number of sites that would seem to have had a high likelihood of native American presence, to date nothing of significant import has been discovered and archaeologists at the Maine Historic Preservation Commission do not expect to discover much in the future. MHPC has surveyed the area and in general, the Donnell-Tunk area is not likely to still contain many artifacts.

Catherine Mountain. During the nineteenth century, attempts were made to extract gold, silver, and molybdenum from Catherine Mountain with little success. The remnants of these mines are barely visible today along the hiking trail. There are no remnants, however, of the farmhouse or prohibition era dance hall once located here. There are persistent legends of a woman wandering the nearby highway dressed in black who is supposed to be the apparition of a woman who left the dance hall, got lost, and died of exposure.

Tunk Lake. For nearly two hundred years prior to the advent of refrigeration, ice from the lake was harvested during the winter and stored in sawdust-filled icehouses. A lakeside fish hatchery supplied small "fry" fish for sport fishing until the 1970's. The lake was a favorite summer recreation getaway for many people, including noted Maine humorist Marshall Dodge, made famous by his "Bert and I" recordings. Many of these visitors reached the lake by floatplane.

Dynamite Brook Road. Many years ago, state employees, while upgrading the road, discovered old dynamite in the nearby brook, undoubtedly left over from the area's mining era. This led to the commonly accepted name for the previously unnamed road. About 200-300 yards west of the bridge and along the north side was an old logging camp, of which only the well remains today.

Wickyup Estate - Tunk Lake. Located on parcel adjacent to the Unit on the southern part of Tunk Lake is the site of the former "Wickyup Estate," which from 1937 was the summer home of Admiral Richard E. Byrd and his family. Byrd, a pioneer aviator and polar explorer, planned three of his Antarctic expeditions at Wickyup. He also wrote his last book, *Alone,* while at the estate, and drafted what became the "Antarctic Treaty of 1959."

The estate was originally developed by the Eagle Mountain Lake Club in the late 1920's. The members were Florida millionaires who wished to vacation in Maine during the summer. The main structure was completed in 1929. Admirable Byrd and his wife first visited the estate in 1933 as guests of a friend. As a result of the Great Depression and the insolvency of some members, the property became available for purchase of which Byrd secured a mortgage, and spent summers thereafter.

Designated as a National Historic Landmark in 1970, Wickyup was destroyed by fire in July 1984; only the four chimneys of the main house remain. Its landmark status has since been removed.

Management Issues

- Spring River Lake, and Long, Tunk, and Round Pond shorelines still hold potential as areas once used by Native Americans for campsites, which will require working with Maine Historic Preservation Commission if active management activities are planned on these shorelines.

c. Fisheries and Wildlife Resources

The combination of acidic bedrock, infertile soils and abrupt topography provide habitats evaluated as being of poor to fair quality in this region of the state. Vegetative diversity is rather limited, with extensive burns having taken place in the Caribou Mountain/Rainbow Pond area in the late 1940's. Higher elevations on the Unit support most of the softwood forest stands, with hardwood forest cover predominating at the lower elevations. Steep slopes, lack of extensive lower elevation softwood cover, and generally poor vegetative diversity are major limitations for wildlife populations.

The Unit contains a variety of lakes and ponds ranging from 10-acre Salmon Pond to 2,010-acre Tunk Lake, which support diverse populations of both warm and coldwater fish. The Maine Department of Inland Fisheries and Wildlife has surveyed many of the ponds on the Unit and has published summaries containing fisheries and water quality information along with a depth map. No fisheries information is available at this time for Shillalah, Mud, Anderson, or Wizard Ponds.

Wetlands on the Unit add a degree of habitat diversity. Three notable wetlands are found on the Unit. Downing Bog, the most significant wetland, lies northeast of Spring River Lake and supports several wetland community types and a bald eagle nest. Gill Bog, which is immediately north of Shillalah Pond supports habitat for waterfowl and wading birds. A large wetland to the southwest of Rainbow Pond supports a beaver population.

Several aerial surveys for wintering deer indicate no documented presence on the Unit during restrictive snow conditions.

Bald eagle and osprey sightings have been frequently reported on the Unit. An osprey nest on the shore of Donnell Pond is protected by the riparian buffer around the pond. The eagle nest at Downing Bog is mapped and protected under Maine's Essential Habitat law. The Bureau works closely with the Maine Department of Inland Fisheries and Wildlife in locating and protecting Bald Eagle essential habitat.

Management Issues

- *A loon-nesting site in the cove where the outlet of Shillalah Pond flows into Donnell Pond needs to be re-evaluated, as it is in proximity to a previously designated campsite (which has since been closed, although it is still used periodically for overnight camping).*
- *Timber management in Redman Valley east of Donnell Pond, to enhance softwood cover for deer, needs to be re-evaluated. The 1991 Plan recommended this management take place.*
- *Invasive aquatics pose a risk to lakes and ponds within the Plan area.*

d. Recreation and Visual Resources

The Donnell Pond Unit offers excellent opportunities for remote and semi-remote recreational experiences. The high quality waters, miles of undeveloped shoreline, sand beaches, hiking trails, and campsites in exceptionally scenic surroundings combine to make this Unit of high recreational value. The Unit has an exceptionally dense concentration of scenic and recreational features as compared with most other lands within the system – enhanced by recent acquisitions of the Spring River/Lake Tunk Lake parcel, and the Fiery Mountain/Little Pond parcel. The recreation management goal for the Unit has been to maintain its remote to semi-remote natural character, while developing a suitable number and type of recreational facilities and opportunities.

As already mentioned, the mountains surrounding the ponds greatly enhance the scenic value of these areas. Tunk, Schoodic, Caribou, and Black Mountains offer considerable hiking opportunities (both existing and potential) with many scenic vistas available.

Fourteen water-accessible campsites are located on Donnell Pond, and four are located on the Tunk Lake frontage. Access to these campsites is accomplished by foot from the Schoodic Beach trailhead or from boat launching sites on Donnell Pond (BP&L managed) and Tunk Lake (IF&W managed). Designated day use areas are located on Donnell Pond (Schoodic and Redmans Beach) and Spring River Lake (Hay Rack Road).

A popular network of hiking trails connect Donnell Pond to Schoodic, Black, and Caribou Mountains. The southern slopes and nearby ponds of Tunk Mountain, acquired as part of the Spring River Lake acquisition, can be accessed via a network of primitive trials. The hiking trail system throughout the entire Unit has significant expansion (and upgrade) potential, with opportunities for access to Catherine Mountain and the Fiery Mountain/Little Pond area to be explored. The potential for developing backcountry, hike-in campsites will be evaluated as part of the planning process.

Portions of the trail network in the Spring River Lake parcel receive use by ATV's, in particular for access to the newly acquired Tilden Pond parcel, and a Bureau camplot lease on the southern end of Anderson Pond. There is also significant motorized use of the existing trails into and near Little Pond. There are no designated ATV or snowmobile trails on the Unit.

The public access roads in the original Unit have been designated "Shared Use," meaning uses by all-terrain vehicles, bicycles, and horses, along with passenger vehicles, are permitted. Designation of the road network on lands acquired since the current plan will be accomplished through this planning effort.

In addition to the Bureau's own assessments and management efforts, utilizing other groups, agencies, and individuals to assist with the recreation program for the Unit will be important in its future management.

Visual Considerations. The scenic quality of the Unit is extremely valuable for public use and enjoyment, because it gives one a feeling of "being away from it all" in a natural setting. Most of the Unit is a scenic resource; with the ridgelines provide views of most of the state ownership, and distant views of coastal bays and islands, lakes, ponds, cliffs and

an expanse of forestland. The old growth red spruce in the Wizard Pond area provides a sense of "wilderness" to the hiker. The views from the sand beaches on Donnell Pond are of undeveloped shorelines and tree covered slopes, which makes for an unusually scenic setting for beach users.

Management Issues

- Vandalism (picnic tables, privies, and kiosks) at Schoodic Beach has been increasing. Undesirable activity in the beach area also includes drinking parties (mostly at night) and ATVers breaching the barrier at the parking area.
- The increased popularity of Schoodic Beach for day use and camping is incurring significant staff time spent on general maintenance. The increase in use is in part due to improved boat access from the Card Mill launching area.
- Summer camp (and other?) groups are monopolizing some of the campsites on Redman Beach. Camping setups are being left for longer than the permitted stay established by rule (14 days in a 45 day period).
- The trail from the Dynamite Brook Rd. to Redman Beach is getting occasional mountain bike and ATV use. Some of this use is occurring along a trail on the east side of Donnell Pond.
- There is recreational vehicle use on the summit of Schoodic Mt. (access is on private land) that spills over onto the Bureau ownership and has caused impacts to the rare plant and Low Summit Bald community.
- Motorized recreational use of Round Mountain coming from adjacent private land pose a threat to the low summit bald community there.
- Should the Ecological Reserve east of Donnell Pond be expanded on the southwest end, reevaluate the potential for this area to be included as Backcountry.
- Parking at the popular Big Chief trailhead to Black Mountain often overflows onto the Black Mountain Road.
- There is interest in considering horsepower limitations or restrictions on various ponds on the unit, including Shillalah, Rainbow, Long, Little Long, Salmon, Tilden, and Little Pond.
- There is demand for additional water-access campsites on Tunk, Spring River Lake, and Long Pond – with a possible group site on Donnell Pond. The Shillalah campsite proposal identified in the 1991 Plan has been of low priority.
- There is demand for providing drive-to campsites, of which there are currently none.
- Many of the current “shared use” road designations allow for ATV use, but lead to on-foot only destinations, and do not provide through trail opportunities.
- There is demand for providing additional horseback riding opportunities on the Unit, which is currently limited to “shared use” roads.
- There is demand for a motorized trail south to north that connects with the GMO (formally IP) - ATV trail system west of Spring River Lake.
- The Card Mill boat-launching area has received more use since improvements were made to the site; will need to work with the campowners association regarding maintenance of the access road in response to this increasing use.
- There is demand for a trailhead to the Fiery Mt./Little Pond area that would eventually link up with the other trail systems on the Unit.
- There is demand for motorized trail opportunities to the summit of Fiery Mountain and Little Pond.

- Although not on the Unit, the summit of Catherine Mountain is often accessed from the state ownership via the Dynamite Brook Road.
- There is need to formally designate a hand carry boat access site on Little Pond. A boat has been stored at the site in the past.
- Determine the potential impacts of the DOT/Sunrise Trail Coalition plans for the Bangor-Calais RR system. ATVs, snowmobiles, and others currently use the corridor for access to the Unit (Little Pond, Schoodic Mt. area).
- Need to determine the recreational impact of the East Coast Greenway and its efforts to utilize a portion of the Unit as part of the trail system, or as a destination off from the trail system.
- The Bureau needs to work with IF&W regarding future management of the boat-launching site on Tunk Lake. Bureau staff provides some occasional maintenance (trash, etc.) at the site.
- There is interest in formally establishing a hiking trail link between the Caribou/Black Mountain area and the Tunk Mountain area. This would involve providing a trailhead off Route 182.
- The primitive trail network in the Spring River Lake/Tunk Mt. area needs to be formally designated. Portions of the trail may need to be redeveloped and/or relocated.
- The existing trailered boat launching area on Long Pond off from Route 182 is unsafe. There are questions, given the small size and remote nature of the pond, as to whether the Bureau should provide a new trailered launching site in a different location. Layout work for a new hand carry site, west of the current site, has been done.
- Determine current or potential use conflicts on the west shore of Long Pond with the six rental sites (tent platform rental agreements) and the use of the area by the general public. The boundaries of the rental sites need to be better determined, and the privies upgraded.
- Determine recreational potential on Round Pond (foot access currently exists from Long Pond rental sites) – and the potential for conflicts with the camp near the Unit boundary on private land.
- The current hand carry site off Route 182 is used primarily for picnicking and bathing. There is demand for providing a trailered launching on the lake. There is a conflict between the rental site holder, day users, and those launching boats at this site.
- There is some snowmobile and ATV trail use on the Spring River Lake parcel. ATV's are used to access the camp on the recent Tilden Pond lot acquisition, the Bureau lease on Anderson Pond, and certain other trails in the area.
- DOT's Blackwoods Scenic Byway Plan (developed by the Hancock County Planning Commission and Washington County of Governments) along the Route 182 corridor from Franklin to Cherryfield will have some impact on the Bureau's management of its lands along the corridor.
- Visual Management - Determine/develop/implement baseline monitoring checklist for managing the aesthetic easement on Donnell Pond.

e. Timber and Renewable Resources

This Unit is very mountainous, providing spectacular scenery and unique ecosystems which have lead to considerable acreage allocated as ecological reserves, and very attractive recreational opportunities. It has a greater history of fire than the other two units, often resulting in low quality stands where fires were especially intense but also producing significant area in high value species such as oak and pines. This combination of characteristics will make timber management challenging because of constraints due to terrain and nontimber values. However, the species mix offers ample opportunity to grow high value timber products. Because of the many mountaintop recreational destinations, essentially all of this tract rates allocation of Class II Visual (except for areas warranting an allocation higher on the hierarchy) so there are no timber-dominant acres. About one-third of unit acres should be available for timber management with only minor restrictions, as a secondary use.

Stand Type Characteristics:

Softwood types are generally found on the wettest and driest sites, most having limited fertility. At the extremes of site drainage the softwood stands are more sparsely stocked and of lower quality, but many softwood areas hold good quality stands with 20 to 30 cords per acre and a high percentage of sawtimber quality trees. These stands offer much opportunity for managing for high value spruce and pine, and most are young enough to respond to the release a partial harvest would produce.

Mixedwood types may be encountered on every site quality and drainage class found within the Plan area. Stocking of mixedwood is extremely variable, with some higher volume stands holding fine quality softwoods and occasional good quality hardwoods, and other stands dominated by poor quality hardwoods with just enough softwoods to make them mixed. The well-stocked stands will be relatively easy to manage as multi aged, as many are already in that condition and others are moving toward it. The sparsely stocked areas tend to be two aged or seedling/sapling stands, and will take time and several harvests to convert to multi aged condition. Many of them are on sites more suitable for softwoods, which often dominate the regeneration and should usually be favored.

Hardwood quality is quite limited on the entire Plan area, due mainly to the absence of high fertility soils. In the Tunk Lake area it occurs in two types, one originating from relatively recent fires and the other from older burns or other causes. The recent-origin burn stands at Tunk tend toward sparse stocking, only 10-12 cords per acre while other hardwood stands have 15-20. Form tends to be poor and limby due to open-grown conditions, though scattered spruce is better and some of the oak and birch is well formed. The limited quality of most hardwood stands was lowered further by breakage caused by the 1998 ice storm. Except where off-site hardwoods are shading good young softwoods, or where harvesting in nearby stands makes entry feasible, little timber management work is needed in hardwoods for the near future.

Management Issues

- Determine the feasibility of continuing harvesting on the north slope of Caribou Mountain to Shilallah Pond.
- Determine the status of the current regulated acreage on the west slope of Caribou Mountain

f. Administrative Concerns

Roads

1) Public access to the Donnell Pond Unit is accomplished in several ways: the recent acquisition and improvements to the Card Mill boat launching area provides public boat access to Donnell Pond from the west. The launching area is accessed from Route 182 in Franklin.

2) Improvements to 2¼ miles of public access/shared use road from Route 183 in Sullivan to the southeast portion of the Unit have been accomplished since the adoption of the 1991 Plan. A parking lot at the end of this road, known as the Schoodic Beach Road, provides a non-motorized access point to Donnell Pond and the area mountains. There are boulders across the north side of the parking lot that prevents motorized access to Schoodic Beach.

3) An additional 1½ miles of public access/shared use road (Black Mountain Road) has been improved off the Schoodic Beach Road to a parking lot trailhead to the Black Mountain area. Beyond this point, the road continues as a management road towards a timber prescribed area near Partridge Peninsula on the southwest portion of Tunk Lake, where management is expected within the next several years. This road also provides the only roaded access to the abutting private land.

4) There is additional vehicle access to the Schoodic Beach Road from the "Punkinville Road," near the northern shoreline of Flanders Pond. Much of this section is maintained by the Flanders Pond campowners, who are the predominant users of the road. Some repairs to the section toward the Punkinville Road have occurred in the past, but the road is in need of significant upgrading.

5) Approximately 6 miles of the 9-mile stretch of state Route 182 between Franklin and Cherryfield passes through or along the Unit in T10 SD. Also known as the Blackwoods Scenic Byway, this important corridor provides various recreational access points within the Unit.

6) The "Thousand Road" is a shared use road located south of Route 182 between Long Pond and Tunk Lake, which provides vehicle access to a short spur to the west shoreline of Long Pond. From here the road becomes impassible except by four-wheel drive, where it continues for ½ mile to the west side of Round Pond. The road continues beyond the spur for approximately one mile to the Unit boundary, and continues onto private land. This road has not been officially designated as either a public use or management road, but does receive sporadic maintenance through a joint agreement with the adjacent landowner. This road would provide access to potential harvest areas in this portion of the Unit.

7) The Dynamite Brook Road, located south of Route 182 across the west corner of Spring River Lake, is no longer designated as a "shared use" road. This 2-mile road was recently constructed through a joint agreement with an abutting landowner, to facilitate the transportation of forest products from those lands, and the management of

prescribed Bureau lands on the north side of Caribou Mountain. This road provides access to non-motorized areas to the West of Donnell Pond and to the adjoining Black Mountain/Caribou Mountain trail system; and administrative access for timber management areas to the north of Caribou Mountain.

8) A ½ mile stretch of management/shared use road begins on the north side of Route 182 west of Fox Pond, continuing onto private lands beyond the Unit boundary. This road is used and maintained by the abutting landowner for transporting timber products, and provides access to an extensive ATV trail system on private lands. This road will also provide transportation access for future timber management anticipated on this portion of the Unit.

Leases

1) The Bureau manages three residential camplot leases in T10 SD. These leases are issued on a five-year renewable basis. All but one were agreements established by the Pierce family prior to the acquisition of the Spring River Lake/Tunk Lake parcel in 1994, which the Bureau agreed to continue as part of the conveyance. The camplot leases are located on Long Pond off from Route 182, where the lessee has roaded access; the southern end of Anderson Pond near the northern boundary of the Unit, where access has been primarily by ATV across private land, and the so-called Tilden Pond parcel recently acquired from International Paper, where access is also by ATV from the same area.

2) The Bureau manages 7 tent platform rental sites in T10 SD, which were also established by the Pierce family prior to acquisition of the property. The Rental Agreements allow for exclusive use of the Spring River Lake/Long Pond sites from May 1st through November 30th. These agreements are renewable on a year-to-year basis, and are for camping purposes only. Six of these sites are located on or near the west shore of Long Pond. The rentees have non-exclusive roaded access from the so-called Thousand Road off from Route 182 to the rental site area.

The tent platforms and privies located on Long Pond are maintained by the rentees. There is also one rental site adjacent to the public day use area on Spring River Lake. The rentee continues to use the site for camping, although a tent platform and privy have not been on the site for many years. The quarter-mile of road to the site provides easy access to the lake from Route 182.

3) An 80-acre (+/-) blueberry barren south of Little Pond has received past management prior to its acquisition by the Bureau in 2001. No agreement is currently in place to manage and harvest the berries at the present time. The barrens were evaluated in the summer of 2004 by a blueberry specialist from the University of Maine who confirmed its management history. He indicated that the upper portion of the field should receive little management due to the thin soils, while the lower fields would benefit from some brushwork, and would otherwise continue to be productive.

Fire Control

The Bureau's Integrated Resource Policy states " Wildfires occurring on or spreading to Bureau lands will be controlled." (pp. 12-17). The Bureau will continue to coordinate with the Maine Forest Service in planning for the prevention and control of forest fires

on the lands that it manages. Such efforts will be undertaken on a regional basis, to ensure Bureau staff can respond adequately and quickly to fire emergencies.

Administrative Structures

A camp near Schoodic Beach ("Camp Chaos") was in use by seasonal work crews developing the hiking trail system during the 1990's, and has not been in use since that time. The camp is a substantial structure, but is in relatively poor condition. There is another camp on Little Pond, which receives some use during the fall hunting season – although it is not known who these users are. The camp is small, and in relatively poor condition. Both camps were in existence when the State acquired the properties.

Management Issues

- Road maintenance agreements (Card Mill, Flanders Pond) are not adequate to meet the future repair and maintenance needs.
- The tent platform rental site program on Long Pond and Spring River Lake needs to be reviewed to determine if there are any conflicts or impacts relative to the Bureau's overall management commitments for these areas.
- Address access issues with the camplot lessees on the Spring River Lake parcel.
- Determine the feasibility of maintaining the blueberry barren near the Little Pond area.
- The camps near Schoodic Beach and Little Pond will need to be evaluated to determine if the Bureau will maintain or remove these structures.

3. Resource Allocations and Management Recommendations

a. Special Protection as Dominant Use. The Ecological Reserve areas east of Donnell Pond (1,940 acres) encompassing Black Mountain and Caribou Mountain; and the north portion of the Spring River Lake parcel (4,010 acres) including the southern slope of Tunk Mountain, remote ponds, and the extensive wetlands of Downing Bog to the east will be designated as Special Protection.

In addition to the Reserves, the Maine Natural Areas Program has identified exemplary Low Summit Bald communities within the summit areas of Schoodic and Round Mountains, along with a dwarf shrub bog between Spring River Lake and Long Pond. These sites will also be designated for Special Protection.

Secondary Uses Within Special Protection Areas. Most of the areas designated as Ecological Reserves are also suitable for Non-mechanized Backcountry Recreation, which is an allowed secondary use within these areas. Recreational uses include hiking in both Reserve areas, and canoeing along Tunk Stream into the Downing Bog area. Hunting, fishing, and trapping are also important and allowed uses in these areas.

Hiking also occurs in proximity to the Special Protection sites on the summits of Schoodic and Round Mountains, and is an allowed secondary use in these areas.

Management Recommendations

- *Monitor recreational use within the Ecological Reserve and special sites for potential conflicts with the values and resources being protected.*
- *Motorized activity will not be permitted in areas designated for Special Protection. A Special Use Permit will be issued to the camp lot lessees on Anderson Pond and Tilden Pond in order to allow traditional ATV access to continue to and from those camps.*
- *The high ground area of the blueberry barren near Little Pond is not suitable for commercial management at this time due, to thin and fragile soils.. Efforts will be made to protect this area and to allow the soils to recover. The lower portion of the fields can be managed using organic farming principles.*

b. Wildlife Management as Dominant Use. Areas within 75 feet or 330 feet of rivers, streams or brooks are designated as wildlife dominant. The goal is to maintain or establish multi-aged forest stands within these areas to function as habitat and as travel corridors.

Secondary Uses within Wildlife Dominant Areas. Recreation (hiking, camping, hunting, fishing, sight-seeing) and timber management are important secondary uses within many of the wildlife areas within the Unit. Timber harvesting will be permitted where it enhances the development and maintenance of the forest habitat.

Management Recommendations

- Survey and monitor Downing Bog for waterfowl and wading birds and Bald eagles.
- Survey Tunk Mountain for nesting raptors

c. Recreation as Dominant Use. Developed Class I will be applied to public use roads within the Unit, as well as areas adjacent to the Route 182 corridor. The Card Mill boat launching site, the Schoodic Beach parking area and trailhead, and the Big Chief trailhead to Black Mountain will all be designated as Developed Class I.

Recreation as a Secondary Use. The areas designated as Ecological Reserves are also suitable for Non-mechanized Backcountry Recreation, which is an allowed secondary use within these areas. Recreational uses include hiking in both Reserve areas, and canoeing along Tunk Stream into the Downing Bog area. Hunting, fishing, and trapping are also important and allowed uses in these areas.

Remote Recreation will be a secondary use along Donnell Pond, Tunk Lake, the southeast portion of Spring River Lake, Shillalah, Round, Long, and Little Ponds. The primary recreational activities in these areas include boating, canoeing, camping, fishing, and hunting.

Management Recommendations

- Expand/develop a trail network and trailheads throughout the Unit that connects the Tunk Mountain, Black/Caribou Mountain, Schoodic Mountain, and Fiery Mountain areas. Utilize partnerships (trail groups, etc.) to both develop and maintain this system, as well as other trail systems (horseback riding, etc.).
- Explore the possibility of expanding the Backcountry Non-mechanized area on the southwest portion of the Black/Caribou Mountain Ecological Reserve to include the lower slopes.
- Explore options to provide recreational/tourism opportunities along the Route 182 Scenic Byway that fit within the goals for the Unit, and within the goals stated in the Department of Transportation Byway Plan. Utilize Byway partners (landowners, local governments, trail groups, etc.) to assist in attaining this goal.
- Develop/improve boat launching opportunities on Long Pond and Spring River Lake, including the possibility of limited trailered launching.
- Explore opportunities for additional remote campsites along the ponds, lakes, and trails within the Unit. Explore the feasibility of providing drive-to sites.
- No further improvements to the Card Mill boat launching site are envisioned; however, public use will continue to be monitored along with future maintenance needs.
- Develop a motorized trail system on the west side of the Unit, in conjunction with abutting private landowners, to provide access to the ATV trail system north of the Unit. Utilize trail groups to assist with both the development and maintenance of this system.
- Close vehicle access to Little Pond and the adjacent area, including remediation of environmental issues on the existing trails and blueberry barren.
- Develop a motorized trail parking area that provides walk-to access to Little Pond. Explore the feasibility of providing motorized trail access to the summit of Fiery Mountain. Utilize trail groups to assist in the development and maintenance of these opportunities.
- Monitor the progress of converting the Calais Branch to a multiuse rail trail, and its potential impacts on the Unit.

d. Visual Areas as Dominant Use. Unless otherwise allocated, Visual Class I (foreground) and II (background) designations will apply throughout the Unit. Visual Class II designations apply because most of the Unit is visible from the ridge tops within the Unit.

e. Timber Management as Dominant Use. Due to the numerous mountaintop recreational destinations and accompanying viewsheds (Visual Class II), there are no timber-dominant acres on the Unit.

Timber Management as a Secondary Use. About one-third of the Unit will be available for timber management as a secondary use, and will be secondary to all other uses on the Unit.

Management Recommendations

- Where timber is included among secondary uses, its management should favor high value (both for timber and wildlife) and longer lived species such as pine, spruce and oak. Where soils are more fertile, maples, ash, hemlock, and beech are also species worth consideration. The objectives will include growing high value timber products, chiefly sawlogs and veneer, while maintaining visual integrity and enhancing the diversity of wildlife habitat.

B. Rocky Lake

1. Character of the Landbase

The 10,904-acre Rocky Lake Management Unit comprises the southern half of T18ED BPP in southern Washington County. For management purposes and administrative efficiency, 115 acres of Public Reserved Land on the southwestern shore of Patrick Lake in Marion Township are also included in the Unit, for a total size of 11,024 acres. The Rocky Lake Unit is located approximately eleven miles north of East Machias on Route 191. The Patrick Lake parcel is located three miles east of Rocky Lake off Route 86.

The Unit is typical of Eastern Maine glacial landscapes with rocky, jagged-edged lakes, divided by low ridges that provide some relief to the otherwise level landscape. Meandering streams and rivers are bordered by abundant natural wetlands. Rocky Lake (1,555 acres), Second Lake (332 acres), and Patrick Lake (275 acres), all warm water lakes, are the principal features on the Unit. Rocky Lake and Second Lake are separated by Rocky Lake Ridge and are connected off the Unit by Rocky Lake Stream, which then flows north and then west into the East Machias River. From here the river flows south into Second Lake, and eventually into Hadley Lake south of the Unit. There are several islands on Rocky Lake, some State-owned and others private.

One of the major uses of this Unit is public recreation around the previously mentioned water bodies with activities including fishing, boating, swimming, canoeing, camping, hunting, trapping, picnicking, bird watching, snowmobiling, and ATVing.

The timber resource on this Unit has a high percentage of young trees. The area was extensively harvested from the 1950's through 1977 when it was acquired by the State from International Paper Co. In the late 1970's and early 1980's, spruce budworm infestation caused extensive mortality and defoliation to softwood species, but essentially all these areas have since naturally regenerated with young fir, spruce, and white pine.

The original Patrick Lake parcel was acquired from Baskahegan Corporation in 1984. Located between the shore of Patrick Lake and Route 86, the parcel is primarily used for day use. The recently acquired Patrick Lake boat access site consists of approximately two acres of land with frontage abutting the Baskahegan parcel. The property was acquired in January 2004 with funds from the Land for Maine’s Future, and the Boating Facilities Fund. Management of the facility was turned over to the Lands Division (which manages the Reserved and Non-reserved Land properties) upon closing on the property.

Wildlife species found on this Unit are numerous. The abundant natural wetlands provide habitat for waterfowl and furbearers; the lakes provide warm water fisheries, and the dense young softwood growth provides key habitat for snowshoe hare, bobcat, deer, and coyote. Also found in lesser numbers are fisher, moose, and bear.

The Unit is bounded primarily by industrial forestlands. GMO Renewable Resources (formally International Paper) is the principle owner to the north; Wagner Forest Management is the primary landowner to the east.

2. Resources and Management Issues

a. Natural and Geological Resources

Upland forests within the Unit are typical of the region, with nearly all areas showing past evidence of harvesting, fire, and/or budworm damage. Mid-successional softwoods (spruce and fir, with pockets of cedar) are dominant on most of the acreage. On a large knoll east of the Machias River, early and mid-successional hardwoods (poplar, red maple) are transitioning into oak-pine forest.

A 1,500-acre wetland-dominated area along the East Machias River is a designated Ecological Reserve. The majority of the Unit is forested upland (68%), while the remainder is forested wetland (20%), non-forested wetlands (10%), and open water (2%).

Notable natural areas at Rocky Lake include two small well-formed, raised Sheep Laurel-Dwarf Shrub Bogs on the east side of Second Lake. A large wetland complex on the western shore of Rocky Lake consists of Spruce-Larch Wooded Bogs and Northern White Cedar Woodland Fens with a small Sheep Laurel-Dwarf Shrub Bog in an open area of the wetland.

In the south-central portion of the unit, a Tussock Sedge Meadow dominates a wetland complex controlled by beavers. The surrounding forest was harvested a few decades ago; however, several very large red maples and a white pine 39 inches in diameter were encountered near the southern portion of the meadow.

The largest exemplary natural community on the Rocky Lake unit, a Streamshore Ecosystem (emergent marsh) covering several hundred acres, is located along the East Machias River, within the Ecological Reserve.

There are no rare plants known to occur on the Rocky Lake unit, including the Patrick Lake parcel. The first Natural Resource Inventory of the unit was completed in 2004.

b. Historic and Cultural Resources

The historic/cultural resources on the Rocky Lake Unit constitute a blend of past land use activities that contribute to the unique character of the Downeast region. These uses include the presence of Native Americans, early rural settlement, including milling, and other activities as described below.

Nomenclature. Smith Mill Pitch was named for the Smith family who once operated a mill in the area and Wigwam Riffles was so-named because of a Native American encampment nearby.

Cultural Resources. No significant archaeological studies have yet been conducted on the Rocky Lake parcel, however its access by canoe from other waterways makes it a likely source of archaeological resources from Native American periods.

Management Issues

- Rocky Lake, Second Lake, and the East Machias River hold potential as areas once used by Native Americans for campsites, which will require working with Maine Historic Preservation Commission if active management activities are planned on these shorelines.

c. Fisheries and Wildlife Resources

The peninsula between Northern Inlet and South Bay contains two active eagle nests. Eagles are common throughout the unit and utilize the superstory white pine trees along rivers and lakeshores for nesting, roosting and perching. Shallow wetlands provide ideal foraging areas. A second eagle nest is located just north of the unit near Second Lake on private land. The ¼ mile circle around this nest encompasses part of the "mitten" west of Second Lake. Although the bald eagle, as a species, is scheduled to be removed from the threatened status, nest sites on public and private conservation land will be counted on to maintain eagle productivity in the future.

The Rocky Lake unit contains a total of 1,867 acres of wetlands, many of which serve as Wading Bird Habitat mapped by the Maine Department of Inland Fisheries and Wildlife. All three lakes in the management unit support a warm water fishery, including bass, pickerel, and perch. A 205-acre Deer Wintering Area is located along the east shore of Rocky Lake.

The East Machias River is an Atlantic Salmon stream. Most of the shoreline on the unit on both sides of the river is designated as an Ecological Reserves. This section contains salmon rearing and spawning habitat and riffle areas as mapped by the USFWS and ASA.

Brook floater mussels, a species of special concern, and Tomah mayflies, a globally rare species, have been found on the East Machias River below Rocky Lake Stream. Though both of these locations are north of the Unit, similar habitat is found within the unit, and there is a high likelihood that these two species could be within the unit. Three bald eagle nests are currently located on the Unit, one near the outlet of Second Lake and two near the inlet of Rocky Lake. Atlantic salmon migrate up the East Machias River.

Management Issues

- *No deer use has been documented in the last ten years in the zoned deeryard between Mud Landing and South Bay. This zoning needs to be reevaluated.*

d. Recreation and Visual Resources

Rocky Lake, Second Lake, and Patrick Lake are the principal recreational features on the Unit. Rocky Lake and Second Lake are separated by Rocky Lake Ridge. They are connected off the Unit by Rocky Lake Stream, which flows north from Rocky Lake, then west into the East Machias River into Second Lake, and eventually into Hadley Lake located south of the Unit. The River, with its interconnecting lakes, provides a popular 39-mile canoe trip from Pocomoonshine Lake to Hadley Lake in East Machias – 4 miles of which are located within the Unit. Several side trips are possible along the way, including one to Rocky Lake along Rocky Lake Stream.

Visitors also enjoy fishing, boating, swimming, camping, hunting, trapping, picnicking, bird watching, snowmobiling, and ATVing in addition to canoeing.

There are 17 combined miles of Shared Use Roads and approved trails on the Unit, used by both snowmobiles and ATVs. The snowmobile trail on the Unit is a groomed trail, eventually connects to ITS 84, a major east-west trail north of Route 9.
Snow conditions in the region vary from year to year, limiting snowmobile opportunities in comparison to other areas of the state. In years of ample snow cover, a 6-week season is typical.

Further development of new recreation facilities and upgrading of existing sites along the shorelines is difficult because the soils are poorly suited for construction of sanitary facilities (privies). The rocky shorelines on the lakes also make boat access to campsites difficult, further limiting their number.

A 330-foot backcountry zone along the East Machias River and Second Lake was put into place as part of the 1989 unit plan to prohibit public vehicular access and protect the remote character of the shoreland areas.

Three single-party, water-access fire-permit campsites with no facilities are located on Second Lake (2 sites) and on the East Machias River (1 site). Campfires are allowed at permit sites provided a fire permit is obtained in advance. A rustic boat launch site for hand launching of small boats is located on the south end of Second Lake, which has also been used for camping. Several other informal campsites with no facilities are located on the shoreline of Second Lake, and along the River. These sites are used by canoeists, but were never formally designated or developed. Fire permits are not issued for these informal campsites.

A single-party, water-access campsite is located at Loose Rock on the southwest shore of Rocky Lake. The campsite has a fire ring, two picnic tables, privy, and an Adirondack shelter – built by the Maine Conservation Corps in 1981. Four campsites each with table, fire ring and backcountry toilet are located along other areas of the Lake and islands. These sites are authorized for campfire use without a permit

The Patrick Lake property is comprised of gently sloping shoreland, with the upland forested with softwood trees. A small beach and picnic area, with no facilities, is a short walk from a parking area located on Route 86. The site improvements at the newly acquired 2-acre parcel adjacent to the day use area include a small gravel parking lot and gravel boat launching ramp.

Two areas on the Rocky Lake Unit offer vehicle accessible recreation facilities. One is located on Rocky Lake on South Bay, and includes 4 campsites with a fire ring, picnic table, and privy. A picnic area and boat site is also located at South Bay; although launching is better suited to hand carry boats. The other is located on Mud Landing on the Northern Inlet of Rocky Lake, and includes a single-party campsite with fire ring, picnic table, and privy; and a picnic area and boat launching site suitable for trailering boats. Fire permits are not required at these areas.

Visual Considerations. The scenic quality of the Rocky Lake Unit is a valuable asset for the purposes of public use and enjoyment. Visual consideration requires additional planning for timber harvesting, recreational development, and related activities in an effort to maintain the natural appearance of the forest. The goal is to make the results of these activities visually unobtrusive rather than invisible.

Maintaining scenic quality is a primary consideration in all areas identified for public use. Visual consideration areas are in place around the public use roads, recreation areas, lakes, and along the East Machias River.

Management Issues

- *The parking, boat launching, and camping facilities at Mud Landing on the Northern Inlet of Rocky Lake seem adequate given the present level of use - except for the need for additional parking space for trailers.*
- *Trailered boat launching at Mud Landing in particular, needs to be revaluated to make it safer and easier to launch boats at this location.*
- *Indiscriminate use of camping facilities, along with the cutting of live trees at South Bay on Rocky Lake will have to be monitored, with a plan of enforcement developed if such use continues.*
- *The recently improved management roads for timber harvesting will have to be evaluated regarding future access by the public. There is a potential conflict between motorized trail users and regular vehicle user on the improved sections.*
- *Look at the potential for a connector trail to bypass three miles of plowed road on the Haynes road.*
- *Look at the potential for a new winter trail across Southern and Northern Inlet to avoid safety issues on the 19 Road.*
- *Evaluate the possibility of enhancing horseback riding opportunities on the Unit.*
- *The designated hand carry launching area on Second Lake is inadequate.*
- *Monitor the Bangor-Calais branch regarding its potential use as a multi-use trail corridor.*

e. Timber and Renewable Resources

The land at Rocky is less hilly than elsewhere in the Plan area. The major constraints to timber management are frequent wetlands and occasional boulder fields. Budworm and salvage harvests were very substantial here, resulting in many acres of modest overstory volume but abundant regeneration. These younger trees often include a lot of spruce and pine, often ready to respond to release following removal of overstory competition.

A large portion of Rocky Lake should be allocated as timber-dominant. Special Protection acres (mainly the ecoreserve) and developed recreation areas will exclude

timber, while relatively small areas allocated to Wildlife, Remote Rec., or Class II Visual, will allow timber as a secondary use.

Stand Type Characteristics:
Softwood types are mainly on dry sites or in wetlands. The former are heavy to spruce and hemlock with significant pine, while the latter are usually dominated by cedar of almost uniformly poor quality, though some wet site areas are mostly spruce/hemlock. The best timber opportunities in this type consist of ensuring growing room for high quality spruce and pine, with hemlock increasing in importance on more fertile areas.

Mixedwood types occupy almost 60% of this area, but much of this type is on land better suited to softwoods, where the softwoods were either harvested or budworm-killed 20-30 years ago. The hardwood component is usually of low quality, dominated by red maple and white (or hybrid white/gray) birch. The softwood portion of these mixedwood stands is mainly spruce/fir and hemlock, with significant pine, and is generally of much better quality than the hardwoods. The recent improvement in hardwood pulp markets offers the chance to preferentially remove the poorly formed stems and favor the quality softwoods, often resulting in softwood type (though with a hardwood component for diversity) in the residual stands.

Hardwood types cover only 10% of this Unit, and much of this area was mixedwood or softwood prior to budworm. These converted-to-hardwood stands usually hold poorly formed maples and birches that in most areas overtop fine softwood-dominated seedlings and saplings. There is a small proportion of the hardwoods not fitting this description, being either true Northern Hardwoods (birch-beech-maple) or holding significant oak, which is generally the best quality hardwood wherever it is found. Timber opportunities here include the same hardwood removals as in mixedwood, and favoring oak where it occurs.

Management Issues

- There is considerable public vehicle use of recently improved roads designed for timber management
- Management of the forest within the Unit provides a challenge in that the merchantable trees in the overstory are often of low quality, whereas the younger trees in the understory are usually of much better quality.

f. Administrative Concerns

A. Leases and Agreements
There are five residential camplot leases located on the unit: one each along Scott Brook in the southwestern portion of the Unit; the East Machias River near Scott Brook; the West shore of Rocky Lake; and two within the backland east of the East Machias River and south of Second Lake. The Bureau has a statutory obligation to continue these leases provided the terms and conditions are met.

B. Public Use and Management Roads, Gates and Road Control

The Diamond Match Road from Route 191 just north of the East Machias town line provides the primary access into the interior of the Unit. The one and one-half mile section of road from Route 191 to South Bay is designated as a public use road. The remainder of the road, into Second Lake and beyond, is classified as a management road, although improvements to this road were made in preparation for a winter harvest in 2004.

The Northern Inlet Road, just over a mile north of the Diamond Match Road on Route 191, provides access to the Northern Inlet boat launching and camping area. This road is also designated as a public use road. The County Road, also known as the Nineteen Road, is owned and maintained by Washington County, and provides access to the northeast corner of the Unit from Route 191.

A gate is located on the on a winter road (for timber harvesting) just north of the Diamond Match Road east of Second Lake. The purpose of this road to prevent vehicular traffic, while allowing for continuance of the motorize trail.

C. Fire Control
The Bureau's Integrated Resource Policy states " Wildfires occurring on or spreading to Bureau lands will be controlled." (pp. 12-17). The Bureau will continue to coordinate with the Maine Forest Service in planning for the prevention and control of forest fires on the lands that it manages. Such efforts will be undertaken on a regional basis, to ensure Bureau staff can respond adequately and quickly to fire emergencies.

D. Administrative Structures
None.

3. Resource Allocations and Management Recommendations

a. Special Protection as Dominant Use. The 1,500-acre wetland-dominated area along the East Machias River designated as an Ecological Reserve will also be designated as Special Protection.

Secondary Uses Within Special Protection Areas. The portion of the Ecological Reserve along the East Machias River is also suitable for Non-mechanized Backcountry Recreation, which is an allowed secondary use within this designation. Recreational use of the backcountry primarily involves canoeing on the river. Hunting, fishing, and trapping are also permitted uses in the backcountry and Ecological Reserve.

Management Recommendations
- Monitor recreational uses within the Ecological Reserve for potential conflicts with the values and resources being protected.

b. Wildlife Management as Dominant Use. The areas within 1320 feet of 2 bald eagle nests (outlet of Second Lake and tip of peninsula in Rocky Lake) and the deer wintering area on the west side of the peninsula in Rocky Lake are designated as wildlife dominant. By policy all riparian areas are wildlife dominant also.

Areas within 75 feet or 330 feet of rivers, streams or brooks are designated as wildlife dominant. The goal is to maintain or establish multi-aged forest stands within these areas to function as habitat and as travel corridors.

Secondary Uses within Wildlife Dominant Areas. Recreation and timber management are allowed secondary uses in wildlife dominant areas. There may be seasonal requirements to avoid potential conflicts with wildlife such as limiting camping or harvesting during critical nesting periods.

Management Recommendations

- Continue efforts to establish or encourage softwood growth on suitable softwood sites.
- Monitor the deer wintering area for conformance with LURC guidelines for use.
- Confer with the Atlantic Salmon Commission regarding possible instream habitat improvement initiatives.

c. Recreation as Dominant Use. Developed Class I designations will apply to the public use roads and the motorized trails throughout the Unit, as well as the public use areas on South Bay on Rocky Lake, Mud Landing on the Northern Inlet, and the boat launching area on Patrick Lake.

Recreation as a Secondary Use. Remote Recreation will be designated as a secondary use along Rocky, Second, and Patrick Lakes, as well as the shoreline of the East Machias River. The primary recreational activities in these areas include canoeing, boating, camping, fishing, and hunting. Timber management will be allowed in these areas on a restricted basis.

Management Recommendations

- The road beyond South Bay will remain a management road, but will be maintained to permit vehicle access to a parking area in proximity to Second Lake. Locating/developing a hand carry boat launching facility on Second Lake will be explored. A portion of this road will be maintained as part of a motorized through-trail.
- Trail improvements or relocation of trails for motorized use will be considered where conflicts with other uses or safety concerns arise. Continue to work with trail groups and the ORV Division to resolve trail use conflicts and to address enforcement issues where necessary.
- Destinations within the Unit for motorized trail users will be explored, including the use of an existing campsite on the west shore of Rocky Lake.
- Improvements to the South Bay boat landing will be explored beyond its current capacity as a hand carry site.
- The Mud Landing parking area will be expanded/reconfigured to accommodate launching, and parking of trailers.
- Develop additional opportunities for remote camping on the lakes and river within the Unit.
- Develop opportunities for other trail uses, such as horseback riding.

- Continue to monitor progress on the potential Calais Branch conversion to a rail trail, and its potential impacts to the Unit.

d. Visual Areas as Dominant Use. A Visual Class I designation will apply on lands adjacent to all public use roads and motorized trails throughout the Unit. There are some Visual Class II areas as seen from the lakes.

e. Timber Management as Dominant Use. A large portion of Rocky Lake will be allocated as timber-dominant. Special Protection acres (mainly the Ecological Reserves) and developed recreation areas will exclude timber.

Timber Management as a Secondary Use. Areas allocated to Wildlife, Remote Recreation, and visual areas will allow timber as a secondary use.
Management Recommendations

Management Recommendations

- Favor high value softwoods, spruce and pine, on most acres, with hemlock important on the more fertile sites and for deer winter cover. True Northern Hardwood type – birch/beech/maple – should be retained wherever the site is fertile enough for its vigorous growth. Oak should be retained, and encouraged wherever possible.

C. Cutler Coast

1. Character of the Landbase

The 12,234-acre Cutler Coast Unit is located along Route 191 in close proximity to the Town of Cutler. The northwest portion of the Unit is within the Town of Whiting. The original 2,174-acre Unit was acquired by the State through the Land for Maine's Future program in November 1989 from The Conservation Fund. A management plan for this parcel was developed and adopted in November of 1993. A subsequent 5-acre parcel was acquired in 1995, which provided additional parking for the trailhead adjacent to Route 191.

In 1997, the Conservation Fund, along with its managing partner, the Maine Coast Heritage Trust, donated 9,485 acres to the State, with the Bureau purchasing an additional 570 acres to complete the 10,055-acre acquisition. This newer parcel contains an important complex of grasslands and heaths, which has since been designated as an Ecological Reserve.

The property's most striking features are the steep, jagged bedrock cliffs jutting into the Atlantic Ocean. Standing on the shore, visitors are dwarfed by the cliffs which present interesting views of basalt columns, overhangs and massive igneous intrusions lying at unusual angles. Sheltered within the Unit's craggy shoreline are the eastern portions of Almore Cove, and all of Long Point and Black Point Coves, each ringed with a cobble beach. Between Almore Cove and Long Point is Fairy Head (which is the designated name and spelling shown on the United States Geological Survey 7.5 minute Quadrangle Map covering). Local lore suggests that Fairy Head should be spelled as "Ferry Head", because ferryboats navigating the Grand Manan Channel used the prominent headland as a landmark to help them find their way into Cutler harbor.

A blowhole has been reported to exist somewhere along the Unit's shoreline, but it has not been seen spouting at the tide levels occurring while Bureau staff were exploring the coastal frontage. A blowhole, sometimes called a spouting horn, is a puncture in the roof of a sea cave where water and spray are forced through cracks and into the air when the proper conditions of wave-created pressure exist within the cave.

From early summer to early fall Humpback, Northern Right, Finback and Minke whales, the first three of which are federal and state-listed "Endangered Species," can occasionally be seen from atop the cliffs.

Most of the 2,179 acres along the coastal side are located on a plateau raised above the ocean. The highest elevation is 220 feet above sea level. Although the upland portion of the property has no significant change in elevation the terrain and micro-topography are diverse. The property is drained by Schooner Brook and Black Point Brook, both bordered by extensive wetland areas.

2 Resources and Management Issues

a. Natural and Geological Resources

The majority of the unit (70%) is forested upland, while the remainder is non-forested wetland (16%), non-forested upland (8%), and forested wetland (6%). The total acreage includes approximately 5,200 acres of designated Ecological Reserve.

The 2,179-acre coastal tract is mostly Ecological Reserve and includes four and a half miles of rocky coastline. The wind, fog, and cool summer temperatures along the Downeast coast create a short growing season and provide a unique habitat for vegetation along this portion. Because of this cool climatic influence, some natural community types here are similar in structure and composition to sub-alpine areas inland or boreal areas much further to the north. Consequently, Cutler has a number of exemplary natural communities. The Open Headland community type is found on the exposed bedrock cliffs, where hearty boreal plants such as black crowberry and creeping juniper grow in narrow fissures in the rock or other areas where small amounts of organic matter accumulate. The Maritime Spruce-Fir Forest natural community, also found close to the coast, is characterized by balsam fir, heart-leaved paper birch, and mountain ash, and the poor growing conditions result in few trees greater than 12 inches in diameter. With shallow, organic soils on bedrock, tip-ups are common, and dead wood is prevalent. In addition, balsam woolly adelgid is causing fir mortality, also contributing to blow downs and decaying wood, which in turn create habitat for insects and birds. Upland forests on the remainder of the unit, particularly those in the northern parcel, have a lengthy history of past fire and heavy harvesting, resulting in a dominance of balsam fir and early-successional hardwoods (poplar, birch).

Five outstanding Bluejoint Meadows on the unit form dense mats of grassy vegetation, which are periodically burned by humans, including efforts by the Bureau and the Maine Forest Service as recent as April 2004. The largest of these grasslands, encompassing over 1,300 acres, lies along the upper reaches of East Stream in the north portion of the Unit. Many believe that periodic burning is needed to maintain the grassland, which is viewed as providing important habitat for wildlife. (The Bureau's 1993 management plan recommends continued use of prescribed fire, and a 170-acre grassland in the coastal unit was most recently burned in 2004.) Recent research from the University of Maine (Dieffenbacher-Krall 1996) suggests that these periodic burns may not be mimicking a natural fire regime and, in fact, may not be necessary for maintaining the quality of the grassland community.

A number of small bogs in the Cutler unit provide additional openings in the forest cover. Two Huckleberry Crowberry bogs are in the unit -- one of these bogs harbors the rare shrub, northern comandra, and the rare crowberry blue butterfly, which feeds exclusively on black crowberry. One exemplary Sheep Laurel Dwarf Shrub Bog occurs in the northern portion of the Cutler unit.

The Natural Resource Inventory for the unit is currently being updated and will include a revision of the original inventory from 1992.

Management Issues

- The value and importance of burning the grasslands south of Route 191 needs to be evaluated as to its future importance. Further research of all of the grasslands needs to be done to verify if they are of natural origin.
- Commercial management/maintenance of the blueberry barrens could impact the surrounding reserve area; areas of concern include the use of fertilizers and free burning necessary to enhance production

b. Historic and Cultural Resources

The historic/cultural resources on the Cutler Coast Unit constitute a blend of past land use activities that contribute to the unique character of the Downeast region. These uses include the presence of Native Americans, hunting, logging, recreation, and other activities as described below.

Nomenclature. The area was named for Joseph Cutler, a proprietor from Newburyport, Massachusetts. Ackley Stream was named for Oliver Ackley who owned land surrounding Ackley Pond. Bagley Brook is named for J. Bagley, who lived nearby in 1881. Bother Brook was so named because it was a “bother” for woodsman to cross. Compass Rock is so named because of a large rock with direction marks on it carved by hunters as a navigational aid. Cocoa Mountain is said to be named after a group of hunters who took cocoa wine with them on a hunting trip there. Some passed out on the mountain, others got lost. French Ridge is named for a man named French who once lived there, Harmon Heath for the Harmon family and Holmes Cove for Holmes, a local lobsterman.

Cultural Resources. The area of coastline running from Long Point to Sandy Point and encompassing Long Point Cove is known to contain significant Native American archaeological resources including stone tools excavated in 1984. It should be protected to the extent possible.

Management Issues

- The management (public use) of the Long Point Cove area needs to address the archeological resources known to be in this area.

c. Fisheries and Wildlife Resources

While there is a diversity of habitat types on the Unit, low site productivity on the coastal portion -- due primarily to thin soils and fire -- has resulted in fair to poor habitat conditions for most species. Human disturbances, particularly fire, have created and are maintaining several habitat types. This disturbance has also degraded the quality of other habitat types. The unique grasslands on the Unit contain potential habitat for some uncommon bird species such as merlin, short-eared owl, yellow rail, and sedge wren. In particular, two rare bird species are associated with the types of habitat found in the Cutler unit, though they have not yet been found there. The sedge wren is a very small brown wren with a short, slim bill and a slim, cocked tail. It is typically found in grassy wetlands; though due to its small size and secretive nature, it is often difficult to find. The yellow rail is a shy, sparrow-sized, yellow-brown bird with dark brown stripes down its back. Its habitat preferences are for freshwater marshes and wet meadows.

Several years ago a yellow rail was sighted just east of the coastal portion of the unit, but it has not been recently verified.

The broad forest types are approximately 60% softwood, 30% mixed wood, and 10% hardwood. The hardwoods are generally small, of poor quality, and are frequently comprised of noncommercial species such as pin cherry and mountain ash, whose fruit are important wildlife foods.

Most wildlife species indigenous to this part of the state are found on the Unit. It has been suggested that the property is prime bobcat habitat. Snowshoe hare are the primary prey for bobcat, and the hare populations are naturally cyclical. Extensive patches of young softwood, the preferred habitat for snowshoe hare, occur on the property. The hare population, one again, appears on the increase. As the hare population recovers, the bobcat population should also increase, provided their other habitat requirements are met. The property may provide escape cover, be part of a travel corridor, or contain den sites for bobcats.

There are bogs (heaths), wetlands, and old beaver flowages scattered throughout the property connected by sluggish streams that support a brook trout fishery briefly in the spring before the water becomes too warm. Nearly all of these wet areas contain well-defined game trails.

Several different wetland types, with potential to harbor unusual or rare species, occur on the property. Peatland areas have pitcher plants and other typical bog plants. There are also extensive stream-wide emergent meadows on the property.

There are extensive areas of grassland barrens on both the north and south sides of the Unit; nearly all this acreage if within the designated as Ecological Reserves. These barrens are dominated by blue-joint grass, flat-topped aster, alder, meadowsweet, and brambles and are found on the upland sites in areas lacking wetland hydrology and wetland soils (Famous and Spencer, 1992). In the absence of fire the grasslands may revert to alder dominated shrub communities, and eventually to birch and mixed forests. Natural succession of the grasslands to shrub or birch and mixed forest communities would reduce the diversity of wildlife habitats on the property.

The coastal cliff community along the rocky headland is a unique community type within the range of mainland properties managed by the Bureau. It is likely that seabirds nest on the ocean ledges. Ravens have been reported to nest on the ledges of the property near Holmes Cove. The coastal bluffs are a good location to observe migrating whales during the fall.

Management Issues

- *Future decisions regarding management (burning) of the grassland areas will have a direct impact on wildlife habitat on the Unit.*

d. Recreation and Visual Resources

Considering its relatively small size, the coastal portion of the Unit imparts a surprisingly powerful sense of wildness. The diverse terrain and micro-topography, stunted

vegetation, and small bogs and barrens make the property aesthetically interesting for visitors. The opportunities to provide for high quality dispersed recreation are excellent. There are no sheltered boat landings or anchorages. Landing small boats at some of the pocket beaches, particularly at Long Point, is feasible during calm sea conditions.

The character of the inland portion is less spectacular and is better suited to recreational activities where the activity is the focus (i.e. cycling, horse, and ORV use) rather than aesthetic appreciation of the landscape. There are 19.5 miles combined of Shared Use Roads and approved ATV trails on this portion of the Unit. These trails are maintained by the East Stream Trail Riders ATV Club.

The coastal portion of the property is accessible by a 10-mile base leg and stacked loop hiking trail network, which offers loop hikes of 5 to 10 miles. A "to the coast and back" 3 mile hike has become quite popular. Three dispersed primitive campsites are located on the coast approximately four to five miles from a 20-car parking lot and trailhead located on Route 191.

The recreation management of the unit is accomplished in partnership with the Cobscook Trails Coalition (CLC). This is a coalition of public and private conservation landowners (The Nature Conservancy, Maine Coast Heritage Trust, U.S. Fish and Wildlife Service, Maine Dept. Inland Fisheries and Wildlife, Quoddy Regional Land Trust and the Bureau of Parks and Lands) and area businesses founded to provide nature tourism opportunities in the Cobscook Bay region. Quoddy Regional Land Trust manages the partnership and employs a trail steward who performs visitor information and routine trail maintenance on all coalition properties. Bureau staff provide assistance on larger maintenance projects.

Visual Considerations. The coastline of the property with its cliffs, coves, pebble and cobble beaches and crashing waves, along with the expansive view it affords of the ocean, is the primary scenic amenity of the Unit.

The inland terrain of the coastal portion of the unit with its diverse micro-topography and vegetation is also aesthetically interesting. Several bald knolls are accessed by the hiking trail network and offer pleasing views of heath, bog, and forest. Views from Route 191 include expansive wetlands, grasslands and blueberry barrens against a backdrop of low hills.

The management of campsites and other facilities along the shoreline require visual sensitivity to boaters.

Management Issues

- *The trails and campsites receive heavy use throughout the hiking season. On sunny weekends the parking lot is full, spilling over to the roadside.*
- *The agreement in place for maintenance of the trails facilities may also not be adequate in addressing this demand.*
- *Administrative access (public safety, fire) from the west coastal section of the Unit is accomplished via a gated road; use needs to be limited to emergency access only, with the location of the key identified for those individuals.*

- *Heavy public use has resulted in a moderate proliferation of "social" trails to overlooks and around campsites developed by repeated use by hikers.*
- *Evaluate the possibility of enhancing horseback riding opportunities on the Unit.*
- *A designated 2-mile connector ATV trail passing through an Ecological Reserves on the north (inland) portion of the Unit could create potential impacts to the grassland area*

e. Timber and Renewable Resources

While Cutler has only modest overall changes in elevation, those changes tend to be very steep, complicating timber management, especially seaward of the paved highway, where harvesting is likely to be very limited. The inland areas had considerable budworm damage and salvage harvesting, but also hold a lot of stands in the mid-age between saplings and mature forest, more so than elsewhere in the Plan area. The sites and climate here are most restrictive, to the point that only half as many tree species were tallied here during the 1999 inventory as were tallied at either Rocky Lake or Tunk/Donnell. Many species of importance on one or both of those parcels are very scarce or totally absent at Cutler.

Timber-dominant acres are limited to portions of the inland section of the unit. Except for some areas of specialized habitat, and for a limited amount of Class II Visual, the commercial forestland outside of the ecoreserve falls most logically to timber.

Stand Type Characteristics:

Softwood types are mainly on the drier sites, either sand/gravel or thin to ledge, though some occur in wetlands. The dry site softwoods are spruce/fir, with most being poletimber – trees mainly 5-10" in diameter. The wet sites have very poor cedar with occasional spruce/fir. There is little in this type that requires attention in the near future. Some areas hold fir that is mature and ready to harvest, while the poletimber would benefit from careful thinning.

Mixedwood types occupy about 2/3 of this area, but as with Rocky much of this type is on land better suited to softwoods and was converted to mixedwood by preferential cutting of spruce and fir. The hardwood component holds much low quality red maple, but also has a lot of white birch, some of which is well formed though the low fertility will limit their sawlog potential. The softwood portion of these mixedwood stands is mainly spruce/fir, and is generally of much better quality than the hardwoods. The opportunity for stand improvement is less here than at Rocky as overall volumes are lower (lowest of any BPL Unit), thus the competition with the preferred softwoods is less intense.

Hardwood types cover only 4% of this Unit, and are either aspen/white birch or red maple/white birch, all of limited quality and opportunity. There is no Northern Hardwood type; in fact, two of the three key species in that type, sugar maple and beech, are absent or nearly so. Management of hardwood type here may be limited to ensuring that some of the type is retained for diversity.

Management Issues

- *The regulated acres on the coastal portion of the Unit do not have good access, and may be better suited as an extension of the abutting Ecological Reserve. A portion of the Reserve on the inland (north) portion that abuts the East Stream Road is better-suited for access and timber management.*

- *Tipping for wreaths is a popular activity on the Unit, including areas designated as ecological reserves.*

f. Administrative Concerns

A. Leases and Agreements
1) The Bureau administers one Residential Camplot lease on the Unit. This lease is within the Ecological Reserve area located off the Cocoa Mountain Road in the north parcel.

2) A commercial lease for the management of approximately 85 acres of blueberry barren is located at the end of the East Stream Road, also in the north parcel. The lease stipulates organic methods for the management and harvesting of blueberries, to protect East Stream, and the ecological values in the surrounding Ecological Reserve area.

B. Public Use and Management Roads, Gates and Road Control
No public use roads are designated on the Unit. A parking lot/trailhead is located off from Route 191 on the south parcel, providing foot access to that portion of the Unit. The Cocoa Mountain Road and East Stream Road are unimproved gravel roads, providing limited roaded access to the interior of the north parcel.

C. Fire Control
The Bureau's Integrated Resource Policy states " Wildfires occurring on or spreading to Bureau lands will be controlled." (pp. 12-17). The Bureau will continue to coordinate with the Maine Forest Service in planning for the prevention and control of forest fires on the lands that it manages. Such efforts will be undertaken on a regional basis, to ensure Bureau staff can respond adequately and quickly to fire emergencies.

Controlled burns are an activity that takes place on the grasslands within the Ecological Reserves and on the blueberry barren on the north parcel. The Maine Forest Service will be consulted and will provide guidance on this activity.
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D. Administrative Structures
None

3. Resource Allocations and Management Recommendations

a. Special Protection as Dominant Use. The Ecological Reserves located on the coastal portion of (1,727) and inland portion (3,489) of the Unit will also be designated as Special Protection. In addition to the Reserves, two additional bluejoint meadows and a maritime spruce-fir-larch forest – all located on the inland portion – will be designated as Special Protection.

Secondary Uses Within Special Protection Areas. The Ecological Reserve that comprises the coastal portion of the Unit is also suitable as a Non-mechanized

Backcountry Recreation area, which is an allowed secondary use within this designation. Recreational use of the backcountry primarily involves a popular hiking trail system providing access to the Bold Coast area of the Unit. Hunting and trapping are also permitted uses in the backcountry and the Ecological Reserves.

In addition, an approved ATV club trail exists on the Reserve on the north lot. An ATV bridge has been constructed to protect the grasslands.

Management Recommendations

- Monitor recreational uses within the Ecological Reserve and special sites for potential conflicts with the values and resources being protected.

b. Wildlife Management as Dominant Use. Riparian areas (330' and 75') are the primary wildlife dominant areas on the Cutler unit. Areas adjacent to wetlands are considered riparian areas as well as rivers, brooks and streams.

Secondary Uses within Wildlife Dominant Areas. Of the lands within this regional plan Cutler has the most fire history. There is evidence that the bent grass community within the ecological reserve areas is the result of intentional and unintentional human caused fires beginning at the time of European settlement. The grasslands community requires fire periodically to set back the invasion of woody plants. At Cutler this has historically occurred through arson fires to "improve the deer habitat" or when blueberry field burns escape. The natural frequency of fires needed to maintain the grasslands is not known but monitoring plots to study the natural succession of the grasslands have been established south of Route 191. It would be desirable to forgo prescribed burns in the reserve south of Route 191, but continue to allow it north of Rt. 191.

Recreation and timber management are allowed secondary uses in wildlife dominant areas. There may be seasonal requirements to avoid potential conflicts with wildlife such as limiting camping or harvesting during critical nesting periods.

Management Recommendations

- Work closely with MNAP staff in monitoring the grassland communities on the unit.
- Work closely with MNAP and the Forest Protection Division of MFS in conducting prescribed burns to meet both grassland management goals and for preventing fires
- Encourage softwood growth on suitable sites.
- Monitor rocky headlands for seabird nesting.

c. Recreation as Dominant Use. With the exception of the hiking trailhead and parking lot on Route 191 (Developed Class I), most of the recreation areas on the Unit are within or along the Ecological Reserves. For that reason, recreation will not be a dominant use on most of the Unit.

Recreation as a Secondary Use. The Ecological Reserve that comprises the coastal portion of the Unit is also suitable as a Non-mechanized Backcountry Recreation area, which is an allowed secondary use within this designation. Recreational use of the backcountry primarily involves a popular hiking trail system providing access to the Bold

Coast area of the Unit. Hunting and trapping are also permitted uses in the backcountry and the Ecological Reserves.

Management Recommendations

- The Bureau will need to look at expanding the current trailhead parking area on Route 191 (currently suitable for 12 vehicles) to accommodate the increasing use of the trail system.
- The system for managing the hiking/camping use on the coastal portion will be reviewed and improved upon.
- Look for opportunities for additional remote campsites on the coastal portion.
- Look for opportunities to provide trails for horseback riding.
- Maintain the current arrangement with the Cobscook Trails Coalition for trail stewardship.
- Monitor recreational uses within the Ecological Reserve, including the hiking trail use on the coastal lot and the ATV trail on the north lot, for potential conflicts with the values and resources being protected. Work with the area trail clubs to accomplish this goal.

d. Visual Areas as Dominant Use. The frontage along the north side of Route 191 will be designated as a Visual Class I, along with areas adjacent to the ATV trail on the north lot. Some Visual Class II considerations may apply from the higher elevations on the Cocoa Mountain Road.

e. Timber Management as Dominant Use.

Timber-dominant acres are limited to portions of the inland section of the unit. Except for some areas of specialized habitat, and for a limited amount of Class II Visual, most of the forestland outside of the Ecological Reserve falls most logically to timber.

Timber Management as a Secondary Use. Areas allocated to Wildlife (riparian areas) or Visual Class I and II will allow timber as a secondary use.

Management Recommendations

- In the next ten-year period, timber management will consist mainly of light removals of low-quality hardwoods and commercial thinnings. Should markets allow, some removal of low quality hardwoods to benefit spruce and fir would be recommended, and some careful thinning of dense softwoods may also be desirable. This latter should favor spruce wherever possible.
- Tipping will be allowed by Special Use Permit where the activity does not conflict with other resources or values being managed or protected.

D. Great Heath

1. Character of the Landbase

The publicly owned portion of the Great Heath (5,837 acres) is located entirely within T18 MD, in Washington County. The system of bogs and wetlands that comprises this peatland complex (or heath) also extends onto privately owned lands in the Town of Columbia.

The majority of the public portion (3,047 acres) of the Great Heath came to the State through tax delinquency in 1933, as recorded in the State Archives in Augusta. A 128-acre parcel in the east-central portion of the property is all that remains of the original minister, ministry, and school lots (832 acres total) in the township. These lots were traded in a land exchange with Down East Timberlands Division (Pejepscot Paper Co., 1988) for a 2,662-acre parcel, thus completing the state's current ownership within the Heath.

In addition to the fee lands, the Bureau also acquired an 88-acre Conservation Easement from Cherryfield Foods along the southeastern boundary of the Heath. Cherryfield Foods, as part of a cranberry project proposal (with the Department of Environmental Protection and the Land Use Regulation Commission), donated this easement in1998.

A blueberry barren on Crebo Flat on the north side of the property is commercially managed by Cherryfield Foods, who have deeded rights to this portion of the property for this purpose.

2. Resources and Management Issues

a. Natural and Geological Resources

One of the largest peatland systems in Maine, the Great Heath is an impressive and vast collection of different peatland types that grade into one another. It is an excellent example of a domed bog ecosystem; supporting an intact array of peatland types that form distinct raised domes, some with secondary pools (small, shallow depressions with standing surface water within the bog). Both the quality and the quantity of peatland types in the Great Heath unit has led the entire publicly owned portion to be designated an Ecological Reserve.

The various types of bogs and fens within the Great Heath have been described and mapped by a number of researchers -- most thoroughly by Davis and Anderson in 1987. The sheep laurel - dwarf shrub bogs in the northeast and central areas of the property are notable for their hummocks and hollows. Both areas contain sparse, small black spruce, larch, and/or white pine. In wetter areas, the sheep laurel - dwarf shrub bog in the northeast grades into an area of leatherleaf boggy fen. This area has scattered larch and black spruce and is bordered by northern white cedar woodland fen. The southeast

portion of the Great Heath supports a huckleberry-crowberry bog with secondary pools. This huckleberry-crowberry bog peatland type is uncommon (ranked S3) in Maine and typically restricted to the cool climate of the Downeast coast. A second huckleberry-crowberry bog is in the northeast quadrant of the Great Heath, and a third is in the northwest portion. A bluejoint meadow grassland occurs at the confluence of the Pleasant River and Taylor Branch. Though bluejoint grass is dominant, tussock sedge is also prominent on the silty floodplain soils. Beaver activity is frequent throughout the lengths of the Pleasant River and Taylor Branch within the Heath, altering streamside vegetation and creating obstacles for canoe passage.

Geologically, the Great Heath unit is underlain by granite bedrock but is probably more influenced by its surficial geology. The unit borders Pineo Ridge, an area famous for its glaciomarine delta deposits. Coarse sand and gravel were deposited on top of marine silts and clays as the last glacial advance melted and sediment washed into the ocean about 12,700 years ago. Most of the coarse sediment areas are now cultivated blueberry barrens, while the silts and clays most likely form a relatively impermeable layer under the bog. An average of three meters of peat now sits atop the marine clays and silts, and some areas of the Great Heath have accumulated eight meters of peat.

Several rare plants are known from the unit. Wiegand's sedge was found on the northeast edge of the unit in the woods that border the bog. Bog bedstraw grows near the confluence of the Pleasant River and Taylor Branch. Maine's only population of Jacob's ladder, a globally rare plant, grows in the southeast portion of the unit.

One dragonfly of special concern, the war-paint emerald, is known from the Great Heath. This species is known from a handful of peat bogs in Maine but may be under-surveyed.

The Natural Resource Inventory for the Great Heath unit is currently being updated and will include a revision of the original inventory from 1982.

Management Issues

- *The Crebo Flat blueberry barren is within an Ecological Reserve area; this will need to be reevaluated relative to the commercial harvesting of berries taking place at this location.*

b. Historic and Cultural Resources

The historic/cultural resources on the Great Heath Unit constitute a blend of past land use activities that contribute to the unique character of the Downeast region. These uses may include the presence of Native Americans, though archaeological study has yet to be undertaken, logging, recreation, and other activities as described below.

Nomenclature

Bill Smith Brook was named for Bill Smith who logged and had a camp there. The same is true for Fred Dorr Brook and Taylor Brook. Crebo Flat was named for Crebo, also a lumberman in the area. The Ingersoll Branch of the Pleasant River was named after a settler in 1798.

Cultural Resources
No significant archaeological studies have been conducted on the Great Heath parcel, however the navigability by canoe of the Pleasant River and its access from other waterways makes it a likely source of archaeological resources from Native American periods.

b. Fisheries and Wildlife Resources
The Great Heath is an aggregation of significant natural wetland communities. Because the Heath is adjacent to the Pleasant River for 7 miles, these wetland communities function to store water during wet periods and provide water discharge directly to the river during dry periods. The Pleasant River is one of 7 Atlantic salmon rivers in Maine and may be impacted by water withdrawals for irrigation and by pesticides used for adjacent commercial blueberry and cranberry production. The Department of Conservation, Bureau of Geology and Natural Areas is a lead agency in implementing a Water Use Management Plan (WUMP) for this river. The WUMP is a non-regulatory effort to work with water users to modify irrigation practices and minimize potential impacts on instream flows.

Species with wetland habitat preferences are found at the Great Heath. These include Wilson's snipe, American bittern, green heron, and great blue heron. Mammals including beaver, muskrat, mink and otter find suitable habitat here. Beaver dams are an ongoing concern, as they can impede fish passage for salmon and other species and add woody debris to the stream.

Management Issues
- *The Pleasant River supports a natural population of Atlantic Salmon; management activities occurring on the Unit will need to be evaluated relative to its potential impact on the fishery.*
- Irrigation withdrawals present a risk to the habitat associated with the Heath, there is a need to work with adjacent landowners and appropriate state and federal agencies minimize the impact of this activity.

d. Recreation and Visual Resources
Recreation consists primarily of canoeing and fishing on the Pleasant River, although access is usually accomplished from private lands adjacent to the Unit. Some camping occurs on the Unit, although it appears that this occurs primarily on private lands as well. The road system to the north provides some access for hunting.

Management Issues
- No developed opportunity for hand carry boat launching occurs on the Unit.

e. Timber and Renewable Resources

As there has never been any forest on this tract included as regulated acres, no timber inventory information has been obtained. Somewhat undetailed (from a timberland perspective) maps contained in the 1982 Plan for Great Heath would point to about 20% of the tract's 5,681 acres being in upland forest isolated by wetlands, and another 20% in forested wetlands; the remainder being nonforest. Both forested areas are likely dominated by softwood species; spruce, cedar, tamarack, fir, with red maple and white birch common enough on some upland acres to warrant their typing as mixedwood. Most of this forest is relatively young and/or of small stem size, and the forested wetlands will probably always hold smaller trees. Given the Ecological Reserve designation, some of the upland acres will eventually progress to late-successional forest, a scarce habitat type in this area of predominantly wetlands and blueberry barrens.

f. Administrative Concerns

Fire Control
The Bureau's Integrated Resource Policy states " Wildfires occurring on or spreading to Bureau lands will be controlled." (pp. 12-17). The Bureau will continue to coordinate with the Maine Forest Service in planning for the prevention and control of forest fires on the lands that it manages. Such efforts will be undertaken on a regional basis, to ensure Bureau staff can respond adequately and quickly to fire emergencies.

3. Resource Allocations and Management Objectives

a. Special Protection as Dominant Use. The entirety of the state's ownership on the Great Heath is allocated as Ecological Reserve.

Secondary Uses Within Special Protection Areas. Wildlife management and recreation (primarily canoeing along the Pleasant River) are important secondary uses within the Great Heath.

Management Recommendations
- Monitor recreational use within the Ecological Reserve for potential conflicts with the values and resources being protected.
- Review the status of the blueberry barren on the northwest corner of the property (Crebo Flat), where commercial blueberry management is permitted by deed.

b. Wildlife Management as Dominant Use. N/A

Wildlife Management as a Secondary Use. Wildlife management will be an important secondary use throughout the Great Heath.

Management Recommendations
- Establish Ecological Reserve monitoring plots as time and resources allow.
- Investigate feasibility of converting blueberry area (Crebo Flat) to organic production.

c. Recreation as Dominant Use. N/A

Recreation as a Secondary Use. Remote recreation will be designated as a secondary use within the Unit. Activities within this allocation include canoeing, camping, and fishing on the Pleasant River, along with some hunting and trapping.

Management Recommendations

- Develop a hand carry boat access site on the Unit.

d. Timber Management as Dominant Use. None

e. Administrative

Management Recommendations

- The maintenance and re-establishment of boundary lines throughout the Unit will be scheduled.

E. Scattered Public Lots

Osborn, North and South

Character of the Landbase
The Osborn Public Lots are Original Public Lots located in the central portion of the Town of Osborn in Hancock County. The north lot, also known as the Weaver Ridge lot, contains 640 acres. The south lot, known as the Tallyhookus lot, contains 320 acres.

The parcels are situated on low, heavily forested ridges surrounded by swamps, with the primary forest cover being mixedwood to hardwood. The slopes are moderate to gentle, with southerly aspects. The soils have many surface rocks and are poorly drained.

The principle features on these properties include a small bog in middle of the north lot, and Johns Brook and associated small bog in the northeast corner of the south lot. No exemplary natural communities or rare plant species are known from the lots.

Wildlife Resources
The parcels support populations of deer, ruffed grouse, and snowshoe hare. There are a number of sizable beech trees on the north parcel, which is probably frequented by bears when beech mast is available. Johns Brook, which flows into Spectacle Pond, supports a brook trout fishery. There is also an eagle's nest east of the south lot on Spectacle Pond.

Recreation Resources
Hunting is the primary recreational activity, which is limited due to lack of road access. There are no recreation facilities, or other recreational opportunities managed for on these lots. The logging roads in the north lot receive some snowmobile use.

Timber Resources
The two public lots (957 acres) on this town hold good quality spruce and hemlock, and fair-poor quality hardwoods, though the hardwoods are probably of better quality here than on the rest of the Plan area. The land is mainly flat to gently rolling, with somewhat better soil quality than the norm for the Plan area. Timber types are 45% softwoods, 35% mixedwoods, and 20% hardwoods. About half the hardwoods and a small part of the mixedwoods are relatively young (50-60 years, and of fire or clearcut origin), but most acres hold trees well over 100 years old.

The Osborn lots have a long history of timber management, with harvests taking place in the late 1960's to early 1970's, and again in the late 1980's to early 1990's. The parcels currently contain an even-aged spruce overstory with beech (very diseased with *Nectria* fungus) predominant in the understory. A timber management lease with the Town of Osborn expired in 1996. This lease, permitted by statute, allowed the Town to manage timber on the lots under a timber management plan authorized by the Bureau.

As there are no recreational destinations on the lots, and only minor watercourses requiring riparian buffers, about 90% of the forest land should be timber-dominant, the rest being wildlife-dominant.

Management Issues

- *Future agreements for the management of timber will need to follow Forest Certification guidelines.*

T24 MD

Character of the Landbase
The 330-acre parcel in T24 MD, located just north of the Great Heath in Washington County, is what remains of the original public lots on the township. Two similar-sized parcels (the minister and ministry lots) were traded as part of a land trade in 1988, leaving the "school lot" in public ownership.

The parcel represents a relatively undisturbed natural area in a highly managed landscape. The public lot is an island in a sea of intensively managed blueberry barrens, and mostly consists of barrens reverted (or in process of reverting) to forest, the rest being wetlands or roads.

Natural and Geolgoiclal Resources
The principle features on the property include a kettlehole pond/wetland complex between gravel "horsebacks." A total of 118 acres of wetlands are found on the parcel including two small bogs: a Sheep Laurel Dwarf Shrub Bog to the southwest and a Sedge Leatherleaf Fen Lawn to the north. The southwestern bog contains a small pond surrounded by a typical mix of dwarf shrub vegetation, including sheep laurel (*Kalmia angustifolia*), pale laurel (*Kalmia polifolia*), and Labrador-tea (*Rhododendron groenlandicum*). The northern bog consists of a well-developed vegetation mat which grades into a less-mature bog near the pond dominated by tufted cotton-grass (*Eriophorum vaginatum*) and narrow-leaved cotton-grass (*Eriophorum angustifolium*). An abundance of beaver activity maintains the northern bog pond.

There are areas within the property that could benefit from ocassional controlled burns.

The surrounding uplands are sparse barrens and Red Pine Woodlands, although the vegetation and structure of the community are young due to previous management practices. Young red pine dominates the canopy, with lowbush blueberry (*Vaccinium angustifolium*), sheep laurel, and bracken fern (*Pteridium aquilinum*) in the understory. The soil is sandy and shallow and underlain by glacial surficial deposits including an esker and a stagnation moraine. Acidic granite is the dominant bedrock type in the area. No rare plants or animals are known from this parcel, though upland sandpipers have been sighted nearby, and it is within the Barren Pond Brook watershed, which is protected for salmon.

Wildlife Resources

Recreation Resources
Recreational opportunities are limited, but include hunting and berry picking. No facilities are provided, although the road system receives some snowmobile use.

Timber Resources
No timber harvest activities have occurred on this lot. The two bogs and associated wetlands on the property, coupled with poor timber growing potential of upland areas, mean only a small portion of the Bureau ownership could be productive timberland. The property is surrounded by commercial blueberry barrens owned principally by Cherryfield foods. A lease granted to Cherryfield Foods for commercial use of the barrens expired in 1982, although they continue to maintain the graveled road through the property, which provides needed access to the abutting lands.

The older (perhaps 40 years) forest holds a lot of oak, and might be managed for mast production through crop tree thinnings. Much of the more recent barren-reversion has favored softwoods, often red and white pine. For the current planning interval no actions are needed.

Management Issues

- *The future leasing of the property for blueberries will need to be reevaluated given its unique/natural qualities relative to the area.*

Number 14 Township, North and South

Character of the Landbase
There are two Original Public Lots in what is now Number 14 Township (once having Plantation status), located just north of the Rocky Lake Unit, and west of Dennysville in Washington County. The north lot contains 650 acres; the south lot contains 320 acres. The lots have been used primarily for winter timber harvesting. The principle features on the lots include Little Cathance Lake located on the north parcel, and Cathance Stream, which bisects both parcels.

Natural &Gelogoical, Fisheries and Wildlife Resources
The terrain and forest cover on these lots resemble those on nearby Rocky Lake, though the lots hold somewhat greater volume per acre. Cathance Stream is a major tributary to the Dennys River, one of the seven Atlantic salmon rivers in Maine, and contains a distinct population segment of Atlantic Salmon.

Recreation Resources
Some hunting and fishing occur, which constitutes most of the recreation activity on the two pracels.

Timber Resources
The forest cover on the parcels is mostly mixed wood and softwood. Timber harvests in the form of spruce budworm salvage operations took place in the mid 1980's; the north lot and the east side of Cathance Stream on the south lot received the heaviest

treatments. Careful adherence to BMP's and riparian guidelines during forest harvesting activities are needed to protect water quality in this stream.

The south lot includes the second largest plantation done under Bureau management, with more than 60 acres planted to spruce in 1984 following a budworm-salvage clearcut. The timber management issues here reflect those for the Rocky Lake Unit due to the similarities in forest cover, and the presence of important salmon stream.

Management Issues

- Management activities will need to address protection of water quality for Atlantic salmon.

Number 21 Township, North and South

Character of the Landbase
There are two Original Public Lots in what is now Number 21Township (once having Plantation status), located west of Princeton and just east of Clifford Bay on Big Lake in Washington County. The north lot contains 600 acres; the south lot contains 350 acres. The principle features on the lots include numerous bogs on the north lot. The terrain and forest cover are similar to those found on the Rocky Lake Unit.

Natural and Geological Resources
In addition to the numerous bogs found on the north lot, a unique cedar stand of approximately 25 acres has been identified, and has been identified as a high quality natural community.

Recreation Resources
Recreational use of the lots is mostly for hunting.

Timber Resources
The forest cover is mostly mixedwood and softwood, and although similar to the Rocky Lake Unit, hold a greater proportion of cedar, and more so than any other tract within the Plan area. As cedar in this region is almost uniformly of poor quality, with the exception of the 25-acre stand previously mentioned, this limits the options for growing high value timber, although there is also good quality spruce and hemlock present.

Administrative Resources
A natural gas pipeline on the south lot, consisting of a 50 foot right-of-way, is leased to Maritimes and Northeast. A 25-lease was issued and the pipeline installed in 1999.

V. Appendices

A. Maps – General Features
B. Maps – Resource Allocations

C. Glossary

"Age Class": the biological age of a stand of timber; in single-aged stands, age classes are generally separated by 10-year intervals.

"ATV Trails": designated trail**s** of varying length with a variety of trail surfaces and grades, designed primarily for the use of all-terrain vehicles.

"All-Terrain Vehicles": motor driven, off-road recreational vehicles capable of cross-country travel on land, snow, ice, marsh, swampland, or other natural terrain. For the purposes of this document an all-terrain vehicle includes a multi-track, multi-wheel or low pressure tire vehicle; a motorcycle or related 2-wheel vehicle; and 3- or 4-wheel or belt-driven vehicles. It does not include an automobile or motor truck; a snowmobile; an airmobile; a construction or logging vehicle used in performance of its common functions; a farm vehicle used for farming purposes; or a vehicle used exclusively for emergency, military, law enforcement, or fire control purposes (Title 12, Chapter 715, Section 7851.2).

"Backcountry Ponds": ponds having no existing road access by two-wheel drive motor vehicles during summer months within ½ mile of the normal high water mark of the body of water with no more than one noncommercial remote camp and its accessory structures within ½ mile of the normal high water mark of the body of water, that support cold water game fisheries and may offer outstanding foot trail, remote camping, and scenic vista opportunities.

"Backpack Hiking Trails": designated foot trails of moderate to long length designed primarily for overnight foot traffic, with primitive campsites provided for overnight camping.

"Campgrounds": areas designed for transient occupancy by camping in tents, camp trailers, travel trailers, motor homes, or similar facilities or vehicles designed for temporary shelter. Developed campgrounds usually provide toilet buildings, drinking water, picnic tables, and fireplaces, and may provide disposal areas for RVs, showers, boat access to water, walking trails, and swimming opportunities.

"Carry-In Boat Access": dirt or gravel launch site**s** accessible by foot over a short to moderate length trail, that generally accommodates the use of only small watercraft. Includes a trailhead with parking and a designated trail to the access site.

"Clear-cut": an single-age harvesting method in which all trees or all merchantable trees are removed from a site in a single operation.

"Commercial Forest Land": the portion of the landbase that is both available and capable of producing at least 20 cubic feet of wood or fiber per acre per year.

"Commercial Harvest": any harvest from which forest products are sold. By contrast, in a pre-commercial harvest, no products are sold, and it is designed principally to improve stand quality and conditions.

"Community": an assemblage of interacting plants and animals and their common environment, recurring across the landscape, in which the effects of recent human intervention

are minimal ("Natural Landscapes Of Maine: A Classification Of Ecosystems and Natural Communities" Maine Natural Heritage Program. April, 1991).

"Compartment": the basic inventory unit, a parcel of forest land, easily identifiable on the ground and generally ranging between 500 and 1,500 acres in size.

"Cross-Country Ski Trails": designated winter-use trails primarily available for the activity of cross-country skiing. Trails may be short to long for day or overnight use.

"Cutting Cycle": in uneven-aged management, the interval between harvest operations.

"Day Walking Trails": designated foot trails of short to moderate length designed primarily for day use foot traffic.

"Demonstration Forest": a forest in which management activities are designed to illustrate various facets of forest management; and/or to demonstrate exemplary multiple use techniques including but not limited to natural, scenic, wildlife, and educational values; and where information transfer through signs, brochures, and tours is provided.

"Ecosystem Type": a group of communities and their environment, occurring together over a particular portion of the landscape, and held together by some common physical or biotic feature. ("Natural Landscapes Of Maine: A Classification Of Ecosystems and Natural Communities." Maine Natural Heritage Program, April, 1991).

"Essential Habitat": areas currently or historically providing physical or biological features essential to the conservation of an endangered or threatened species in Maine, and which may require special management considerations. Examples of areas that could qualify for designation are nest sites or important feeding areas. For some species, protection of these kinds of habitats is vital to preventing further decline or achieving recovery goals.

"Exotic (nonnative)": a species that enters or is deliberately introduced into an ecosystem beyond its historic range, except through natural expansion, including organisms transferred from other countries into the state, unnaturally occurring hybrids, cultivars, genetically altered or engineered species or strains, or species or subspecies with nonnative genetic lineage.

"Folist Site": areas where thick mats of organic matter overlay bedrock, commonly found at high elevations.

"Forest Condition": the state of the forest, including the age, size, height, species, and spatial arrangement of plants, and the functioning as an ecosystem of the combined plant and animal life of the forest.

"Forest Type": a descriptive title for an area of forest growth based on similarities of species and size characteristics.

"Group Camping Areas": vehicle or foot-accessible area**s** designated for overnight camping by large groups. These may include one or more outhouses, several fire rings or fire grills, a minimum of one water source, and several picnic tables.

"Group Picnic Area/Shelters": areas designed to accommodate large groups that are generally separated from other nearby recreation facilities. These areas will usually include a large indoor charcoal grill and a large field area for game play. Outhouses may be shared with other users of the parcel.

"Horseback Ride/Pack Stock Trails": generally moderate to long-distance trails designated for use by horses, other ride, or pack stock.

"Hybrid": the offspring of genetically dissimilar parents or stock especially those produced by breeding organisms of different species, varieties or races.

"Improved Boat Access": vehicle-accessible hard-surfaced launch site**s** with gravel or hard-surface parking areas. May also contain one or more picnic tables, an outhouse, and floats or docks.

"Interpretation": an educational activity which aims to reveal meanings and relationships through the use of original objects, by first hand experience, and by illustrative media, rather than simply to communicate factual information.

"Interpretive Trails": designated trails of short to moderate length designed to provide information regarding natural, historic, or cultural features, or wildlife. Information can be provided using a variety of methods ranging from self-guided trails with numbered posts corresponding to a booklet to those in which staff provide regularly scheduled guided programs.

"Invasive Species": generally nonnative species which invade native ecosystems and successfully compete with and displace native species due to the absence of natural controls. Examples are purple loosestrife and the zebra mussel.

"Log Landings": areas, generally close to haul roads, where forest products may be hauled to and stored prior to being trucked to markets.

"Management Roads": roads designed for timber management and/or administrative use that may be used by the public as long as they remain in service. Management roads may be closed in areas containing special resources, where there are issues of public safety or environmental protection.

"Mature Tree": a tree which has reached the age at which its height growth has significantly slowed or ceased, though its diameter growth may still be substantial. When its annual growth no longer exceeds its internal decay and/or crown loss (net growth is negative), the tree is over-mature.

"Non-mechanized": a mode of travel across the landbase which does not utilize internal combustion, electric, or mechanically powered conveyances; which in itself constitutes a recreational activity, or facilitates participation in a recreational activity.

"Motorized": a mode of travel across the landbase which utilizes internal combustion or electric powered conveyances; which in itself constitutes a recreational activity, or facilitates participation in a recreational activity. This includes or assumes the use of mechanized forms of travel, such as a bicycle, for the same purpose.

“Mountain Bike Trails”: designated trails generally located on rough trail surfaces with moderate to steep grades, designed primarily for the use of mountain bicycles with all-terrain tires by individuals seeking a challenging experience.

“Multi-aged Management": management which is designed to retain two or more age classes and canopy layers at all times. Its harvest methods imitate natural disturbance regimes which cause partial stand replacement (shelterwood with reserves) or small gap disturbances (selection).

“Native”: any species present in an ecosystem within its historic range, or naturally expanded from its historic range.

“Natural Resource Values”: described in Maine’s Natural Resource Protection Act to include coastal sand dunes, coastal wetlands, significant wildlife habitat, fragile mountain areas, freshwater wetlands, great ponds and rivers, streams, and brooks. For the purposes of this plan they also include unique or unusual plant communities.

“Nontimber Management”: describes acres on which, due to administrative decision or site/terrain factors, either will not be cut or otherwise are unlikely to be cut. These acres will be excluded from sustainable harvest calculations.

“Old Growth Stand”: a stand in which the majority of the main crown canopy consists of long-lived or late successional species usually 150 to 200 years old or older, often with characteristics such as large snags, large downed woody material, and multiple age classes, and in which evidence of human-caused disturbance is absent or old and faint.

“Old Growth Tree”: for the purposes of this document, a tree which is in the latter stages of maturity or is over-mature.

“Pesticide”: a chemical agent or substance employed to kill or suppress pests (such as insects, weeds, fungi, rodents, nematodes, or other organism) or intended for use as a plant regulator, defoliant, or desiccant. (from LURC Regulations, Ch. 10)

“Primary Forest”: forest areas which have no discernible evidence of human-caused disturbance. Depending on where a particular primary forest is along its stand replacement sequence, it may or may not fit the definition of old-growth.

“Primitive Campsites”: campsites that are rustic in nature, have one outhouse, and may include tent pads, Adirondack-type shelters, and rustic picnic tables. Campsites may be accessed by vehicle, foot, or water.

“Primitive Picnic Areas”: trail or water access only areas that may contain one or more rustic picnic table, fire ring or outhouse.

“Public Road or Roadway”: any roadway which is owned, leased. or otherwise operated by a government body or public entity. (from LURC Regulations, Ch. 10)

"Public Use Roads": all-weather gravel or paved roads designed for two-way travel to facilitate both public and administrative access to recreation facilities. Includes parking facilities provided for the public. Management will include roadside aesthetic values normally associated with travel influenced zones.

"Recreation Biking Trails": designated trails of short to moderate length located on hard-packed or paved trail surfaces with slight to moderate grades, designed primarily for the use of groups or individuals seeking a more leisurely experience.

"Recreation Values": the values associated with participation in outdoor recreation activities.

"Regeneration": both the process of establishing new growth and the new growth itself, occurring naturally through seeding or sprouting, and artificially by planting seeds or seedlings.

"Regulated Forest Acreage": that portion of the commercial forest landbase on which the sustainable harvest will be calculated at or near maximum sustainable levels.

"Release Cutting": any cutting operation designed to remove competing vegetation from or establish proper spacing intervals among featured trees.

"Riparian": an area of land or water that includes stream channels, lakes, floodplains and wetlands, and their adjacent upland ecosystems.

"Rotation": the age at which stands of timber are harvested for particular economic or silvicultural objectives.

"Salvage": a harvest operation designed to remove dead and dying timber in order to remove whatever value the stand may have before it becomes unmerchantable.

"Selection": related to multi-aged management, the cutting of individual or small groups of trees; generally limited in area to patches of one acre or less.

"**Semi-Regulated Forest Acreage":** describes acres on which, due to site, terrain or nontimber values, will yield commercial forest products at rates significantly lower than the maximum sustainable were timber the dominant use. These acres, which will have periodic but non regular harvests, are to be distinguished from those on which commercial timber harvesting will be excluded.

"Service Roads": summer or winter roads located to provide access to Bureau-owned lodging, maintenance structures, and utilities. Some service roads will be gated or plugged to prevent public access for safety, security, and other management objectives.

"Significant Habitat": those habitats regulated by the Natural Resources Protection Act (NRPA) administered by the Maine Department of Environmental Protection. Essential habitats include freshwater wetlands, vernal pools, waterfowl and wading bird habitats, deer wintering areas.

"Silviculture": the branch of forestry which deals with the application of forest management principles to achieve specific objectives with respect to the production of forest products and services.

"Single-aged Management": management which is designed to manage single age, single canopy layer stands. Its harvest methods imitate natural disturbance regimes which result in full stand replacement. A simple two-step (seed cut/removal cut) shelterwood is an example of a single-aged system.

"Site Quality": the combination of environmental factors and species' requirements which serve to measure the degree of success with which a particular species of tree will occupy a given area of the forest.

"Snowmobile Trails": designated winter-use trails of varying length located on a groomed trail surfaces with flat to moderate grades, designed primarily for the use of snowmobiles.

"Specialized Habitat": habitat areas and features including rare natural communities, riparian areas, wetlands, mast-producing trees (beech and oak), grasslands, snags and den trees, large woody debris on the ground, raptor nesting trees, apple trees, and alpine slopes.

"Stand": a group of trees, the characteristics of which are sufficiently alike to allow uniform classification.

"Sustainable Harvest": that level of timber harvesting, expressed as treated acres and/or volume removals, which can be conducted on a perpetual basis while providing for nonforest values as expressed in this document. Ideally this harvest level would be "even-flow," that is, the same quantity each year. In practice, the current condition of the different properties under Bureau timber management, and the ever-changing situation in markets, will dictate a somewhat cyclical harvest which will approach even-flow only over time periods of a decade or more.

"Sustainable Harvest Unit": a grouping of Bureau parcels with total area in the range of 10,000 to 50,000 acres, typically one or more consolidated units plus nearby smaller tracts, for which forest conditions are similar enough to make unified sustainable harvest calculations feasible.

"Unimproved Boat Access": vehicle-accessible launch sites with dirt or gravel ramps to the water and parking areas, and where no other facilities are normally provided.

"Unregulated Forest Acreage": describes acres on which, due to administrative decision or site/terrain factors will not be harvested, or are very unlikely to be harvested. These acres will be excluded from sustainable harvest calculations.

"Waste Disposal Facility": any system or facility intended for storing or disposing of liquid or solid wastes.

"Wide-area (Landscape)": in the context used in this document, this is the large-scale view of the land, beyond forest stand or compartment level, taking in entire consolidated units or more, and including similarities and contrasts with conditions on abutting lands.

D. References
E. Public Advisory Committee Members
F. Summary of Public Comments
G. Technical Appendices – Natural and Geological Resources
H. Technical Appendices – Historic and Cultural Resources
I. Technical Appendices – Fisheries and Wildlife Resources
J. Technical Appendices – Recreation and Visual Resources

DOWNEAST TIMBER – The Three Unit Areas: DATA OUTLINE

Composition by Acreage

Note: Osborn was inventoried as part of the DUCK parent unit, and its acres are listed separately. Unit acres for Cutler, Rocky, and Tunk/Donnell include only size classes 2 and 3, those included in the 1999 inventory. Size class one (seedling/sapling) acres, which were not inventoried, are shown only for the Plan area as a whole.

Tract	Cutler	Rocky	Tunk/Don	Osborn	Size Class 1		Plan Area
Forest Acres	5,320	8,659	6,539	907	2,063		23,488
Timber Type							
Softwood	30%	32%	31%	46%	28%		31%
Mixedwood	66%	58%	35%	35%	49%		52%
Hardwood	4%	10%	34%	19%	23%		17%

Stocking by Volume – Inventoried Acres, plus Estimated for Size Class 1

Note: Osborn was inventoried as part of the DUCK Parent Unit, which it closely resembles, and its volumes shown are those of the DUCK P.U. The non-inventoried size class one holds an estimated five cords per acre in scattered overstory trees.

Tract	Cutler	Rocky	Tunk/Don	Osborn	Size Class 1	Plan Area	Inv. Ac. Only
Forest Acres	5,320	8,659	6,539	907	2,063	23,488	21,425
Avg. Cd/ac	15.0 cd/ac	16.7 cd/ac	18.4 cd/ac	22.9 cd/ac	5.0 cd/ac	16.03 cd/ac	17.10 cd/ac
Softwood	17.2	16.8	21.9	28.3	5	18.03	19.13
Mixedwood	14.0	16.3	20.3	18.0	5	15.48	16.45
Hardwood	15.1	19.0	13.5	17.2	5	13.98	15.18

Composition by Volume – Top Ten Species (black/red/white "spruce" taken as one species)

Rank	CUTLER	ROCKY	TUNK/DONNELL	THREE UNITS
1	Spruce 34%	Spruce 24%	Spruce 31%	Spruce 29%
2	Fir 26%	Red maple 24%	Red maple 14%	Red maple 17%
3	White birch 13%	Cedar 17%	White pine 11%	Cedar 11%
4	Red maple 11%	Hemlock 6%	Red oak 7%	Fir 10%
5	Cedar 7%	White pine 6%	Hemlock 6%	White birch 7%
6	Yellow birch 5%	Fir 5%	White birch 5%	White pine 6%
7	Tamarack 3%	White birch 5%	Beech 5%	Hemlock 5%
8	Aspen 1%	Aspen 4%	Cedar 5%	Yellow birch 4%
9	-	Yellow birch 4%	Fir 4%	Aspen 3%
10	-	Beech 2%	Aspen 3%	Red oak 3%
Avg. DBH	7.91"	8.95"	8.50"	

Recent (1985 onward) Harvesting – No 1985-on harvests by BPL on Cutler, Twp 14, Twp 21.

Osborn	1988-91: 728 ac., 8,758 cd	1995: 21 ac., 168 cd.	
Rocky	1988-91: 479 ac., 8,888 cd.	1994: 78 ac., 637 cd.	2003-04: 513 ac., 4,683 cd.
Tunk/Donnell		2000: 12 ac., 361 cd.	2004: 130 ac., 1,064 cd.

Plan Area:	1988-91:	1,207 ac., 17,646 cd.	
	1994-95:	99 ac., 805 cd.	
	2000:	12 ac., 361 cd.	(Dynamite Brook Road R-O-W)
	2003-04:	643 ac., 5,747 cd.	(2004 through Sept. 30)
Total, 1985 on:		1,961 ac., 24,559 cd.	(Volume per year, 1,228 cd., is 16% of maximum sustainable harvest of 7,557 cd/yr.)